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SAFEGUARDING CHILDREN'S NERVES

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A HANDBOOK OF MENTAL HYGIENE

BY

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WITH A FOREWORD BY

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PREFACE

THESE informal talks on the mental hygiene of the child have been prepared to meet a definite demand for a work of this kind which has arisen among parents, graduate nurses, educators, physicians, and others who are interested in the problems of child life. How to protect the developing nervous system of the infant and the child against both the hardness and the softness of modern life is an important and imminent problem which cannot be solved by any single text-book, however complete and extensive. But there are certain elementary principles which if followed by those who undertake the care of children, must be fruitful in good results, just as there are certain trends in modern life which if allowed to continue cannot help but unfit many children for the storm and stress of the world which lies outside the family circle.

We have attempted here to summarize what we believe should and should not be done as a means to upbuild or restore the mental and nervous health of the infant and the child, and we have endeavored to make the summary as brief in scope and as practical in application as is possible within our limitations.

While it is true that the word psychology is nowadays much abused, and that much exact knowledge based on research is still needed to rationalize our actual knowledge of child psychology, yet it should be possible to avoid the conflict of schools and theories by utilizing such certain facts as our knowledge of the primary instincts—fear, repulsion, curiosity, pugnacity, self-abasement and tenderness—to the end that those who have the care of children may have a rational working basis for the mental guidance

of their charges. Such has been the object in view in planning these essays; they are written almost entirely with the normal, or almost normal child in view, to aid those who wish to conserve mental health in childhood.

While all of these articles as published are mosaics of the work of both of us, each chapter was first laid down and drafted in its original form by one of the co-authors.

We wish to acknowledge our indebtedness to numerous authorities on psychology, medicine and child-training, many of whom have been quoted at length. We are especially grateful for permission to use the illustrations in this volume, all of which are copyrighted by the American Child Health Association, 370 Seventh Avenue, New York, N. Y., and are taken from their publications.

JAMES J. WALSH.
JOHN A. FOOTE.

FOREWORD

No one questions the use of preventive medicine in warding off serious disease. By it we have almost eradicated the old scourges of smallpox, cholera and typhoid. But we have not yet advanced sufficiently to apply the same principle in dealing with more subtle troubles. "Nerves," for example, is often used as a term of impatient contempt. In awakening our people to their inherent dangers, particularly for our children, Doctor Foote and Doctor Walsh are performing a fine public service.

Five years ago the American people received a shock at the revelation made by the draft. Only one in every four of our young men was then shown to be particularly fit. The mental disturbances, however, caused by that revelation soon subsided. We rejected those men for the army, but we let them drift back without question into our industrial life. There they remain today, a serious handicap to progress, because in their youth no one corrected their remediable defects.

As the last generation, in giving those men to us, gave us a burden, so we now are passing on a like load to the next generation. Of twenty-two million children in our schools, thirty per cent. are so far below standard weight as to suggest a condition of undernourishment, and three million are in urgent need of medical attention. Most of this is due to lack of understanding in parents rather than to poverty. America, the richest country in the world today and with the highest average of education, ranks low in its maternal mortality rate among nations advanced enough to have such statistics. It ranks sixth in its infant mortality rate.

We have the resources, the intelligence, the technical knowledge, the enterprise necessary to eradicate it. We must secure a broad plan of public education, by which the scientific information within our reach may be put at the disposal of our professional workers and our parents. This is a service which the American Child Health Association is organized to perform. It is concerned with all the manifold directions in which such education can travel.

This Association is a union of the American Child Hygiene Association with the Child Health Organization of America. It aims to give stimulus to every effort in the whole cycle of child life, from the prenatal period down to the time the individual boy or girl enters the industrial or college field. The promotion of health, not the curing of illness—this is the slogan that this Association has created to implant in every doctor, nurse, public health official, teacher and parent. The vast majority of our children are born normal physical beings. Only about a quarter of them reach maturity in this condition. The problem of education is to maintain them normal rather than to cure their infirmities. In this work of making sound American infants into sound, sane men and women, it hopes to enlist the aid of every single citizen.

(Signed) Herbert Hoover.

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I

THE CHILD IN THE WORLD OF TODAY

"Men are very similar at birth; it is afterwards the great differences arise."

The Lun Yu of Confucius.

* * * *

"The world is too much with us: late and soon,
Getting and spending, we lay waste our powers;
Little we see in nature that is ours."

WORDSWORTH: *Miscellaneous Sonnets.*

THE CHILD IN THE WORLD OF TODAY

We hear so much of improvement in health as the result of hygiene and sanitation and better methods of living generally that it is no little surprise for most people to learn that the number of patients suffering from nervous diseases is constantly growing. This is particularly noticeable as regards children. The nervous child used to be a very great exception found mainly in families with rather marked nervous heredity. Now wherever there are two or three children in the family it is not at all unusual to have at least one of them exhibit very definite signs of nervousness, and in some cases all of the children manifest those tendencies to irritability on slight cause and to overreaction to emotional stimuli which are so characteristic of the nervous child.

This increase in the number of nervous children is paralleled by certain unfortunate manifestations in the social and mental life of our time among children that are worth while noting. The number of suicides is constantly increasing in our generation and the age at which self-destruction is accomplished is on the average younger than it used to be. With increasing frequency the newspapers bring us accounts of children who, because of some failure in school work or disappointment in the attainment of some purpose that they set themselves, take refuge in suicide. Besides the insanity age is growing ever younger on the average than it used to be, and there is a distinct tendency to lack of self-control and to disturbance of mental equilibrium greater than was the case even a generation ago and, so far as the records enable us to know anything about it, much more than a century ago.

It might, perhaps, be thought that nervous manifestations in children were really not more frequent than formerly, but that the fewness of children in families made parents and friends more solicitous about the children and therefore made them notice their actions and reactions more closely than before. Any such soothing explanation of present-day conditions as regards the nervousness of children is contradicted by the conditions noted with regard to serious mental disturbances; but then, besides, there are other evidences of the increasing tendency of young folks just before and during adult life to have diminished control of their nervous systems, which make it very clear that the increasing nervousness of children is not an illusion due to over-solicitude, but is a reality consequent upon the conditions of social life in recent years.

SOME LESSONS OF THE WORLD WAR

This was demonstrated very clearly by developments during the Great War. The greatest surprise that came to physicians during that war, which tried human nature to its depths so seriously, was undoubtedly the fact that the specialist in nervous diseases proved just next to the surgeon to be absolutely indispensable for the armies of the world. Before the war no one, and least of all the physicians themselves, had the slightest inkling that the neurologist would be needed for anything more than he was, for example, during our Civil War, when his principal and most important duty was to determine the location of nerves that had been injured by bullets, or to work out the localization of injuries within the skull or perhaps of the spinal cord, in order to direct the surgeon how to proceed for their relief. These were practically the only demands made upon the neurologist in preceding wars, and the story of them was recent enough and the memories of them

sufficiently fresh and detailed to make us feel that we were justified in drawing conclusions from them as to what would be anticipated in this war, even though it was far more demanding upon human nature than any of its predecessors. In this assumption we were, as the event proved, quite mistaken. The character of war itself has changed, and now makes a much more serious call upon the nervous system than a generation ago, but what is still more true is that human nature in civilized countries has become more susceptible to nervous affections than it was before. Hence the necessity for the neurologist to fill a large and important rôle in the care of young soldiers whose nervous control has given out as a consequence of the war conditions to which they were submitted, and hence the greater need for special trained care of even the normal, and especially of the nervous child in order to prevent, as far as possible, developments that in recent years have been occurring more and more frequently.

"SHELL SHOCK" A DISEASE OF THE EDUCATED

The Allies had to maintain some fifty thousand beds behind their lines in which to care for soldiers suffering from nervous breakdown. This was called, at the beginning of the war when the true inwardness of the condition was not recognized, by the unfortunate name "shell shock." The reason for the misnomer was that members of the army medical service were not prepared to recognize pure neuroses or psycho-neuroses as having such serious symptoms and occurring in such numbers. The army surgeons were not accustomed to think of hysteria as at all likely to occur in such numbers among young troops, and so it was felt that the symptoms as seen must be due to a concussion of the brain or perhaps of the spinal cord caused by the explosion of a shell in the immediate neighborhood of the

victim. Many of the severer cases had been in immediate neighborhood of exploding shells, though almost as a rule they had not been injured physically. The war was not long in existence, however, before it was noted that this nervous breakdown developed and some of the most severe forms of it were seen among those who had never been within hundreds of miles of an exploding shell. What was called "shell shock" was a mental state exhibiting itself in a series of bodily symptoms through the nervous system and hence called a *psychoneurosis*. Shell shock in the great majority of cases was nothing more than old-fashioned hysteria.

This hysteria occurred in the educated more than the uneducated, affected particularly the university men, and was four times as common in proportion to numbers among the officers of the British army for instance as among the enlisted men. It was more common among the city dwellers than among the country boys in the ratio of their numbers, though curiously enough the country boys, and especially those from the farms, did not stand the physical strain so well, and there were bodily breakdowns of various kinds in larger proportion among them than among the city dwellers. What is perfectly clear from the war's experience was that civilization is causing an instability of the nervous system and a failure to be able to control it under stress and severe strain which has gone so far as to make serious inroads on the military strength a nation can recruit in our day. This was not due to any basic mental disequilibrium, for even in such countries as Belgium and Servia where men and women and children had to go through trials and hardships as great as ever have been chronicled in history, the proportion who went insane was not noticeably higher than would have been the case if peace had continued. A few more

insanity patients were noted, but they represented only the anticipation of an inevitable insanity that would have occurred a little later anyhow from family tendencies under the ordinary stresses of life.

UNEXPECTED MARVELS OF PHYSICAL ENDURANCE

On the other hand it was striking how well men were able to withstand bodily trials that would have been declared quite impossible for them even by those who presumably best understand human nature in our time. Undoubtedly if a physician had been asked before the war, "What will happen to our young men taken just as they are between the ages of twenty-one and thirty-one if they are asked to stand the awful strain of modern warfare? If the young men from the cities, the department store clerks and teachers, the bank employees and the young professional men, the university students and the brokers and bookkeepers with all the other indoor workers, are required to live in open ditches in the open fields winter and summer, spring and fall, whether it rains or snows, whether it freezes or melts, whether their clothes are soaked through or their shoes are wet, often without change of garments for many days, living and sleeping without a chance of relief, what will become of them?" I think that any physician in the world would have said at once that such recruits would inevitably break down under it. Many of them would suffer in mind, most of them in body, but all of them would surely suffer from nervous exhaustion if life under these conditions was prolonged beyond a few weeks. He might have added that perhaps you could take the workers on the ranches in the West or the men from the mining camps and the lumber camps and submit them to such conditions with reasonable hope

of having most of them be able to go on, but that you could not do it with the young men from the cities.

The event proved a great contradiction of such opinions. The young men as a rule, and this meant more than nine out of every ten of them, came home in much better condition physically and mentally and nervously than they had ever been before. Of course a certain number of them when submitted suddenly to the awful conditions of modern warfare lost control of their nervous systems, broke down under it and had hysteria or a series of hysterical seizures. As a rule, however, those who were inducted gradually into military life not only were able to stand conditions but actually to develop health and strength under them.

That conditions of city life tend to destroy the normal capacity for resisting unusual mental strain, and that children and youth of the well-to-do, who have few obstacles to overcome in making their way in the world, are generally less able to endure severe mental hazards than their brothers and sisters who are relatively poor, would seem to be borne out by the statistics of the war as they apply to the nervous disease miscalled shell-shock. *The knowledge that one cannot always have his own way, and that the world is not always ready to do one's bidding, is one that is best learned in childhood, else it may never be acquired, or acquired only at the cost of a destructive waste of nervous strain.*

ENFORCING THE IDEA OF ACHIEVEMENT

This was the lesson that was needed for the bringing up of young folks in this country. The so-called strenuous life in America and the progress of civilization has not made more weaklings among mankind than we had before, and the race is not deteriorating by heredity from its pris-

tine power to do and stand hard things; though the habits of life that most city dwellers are cultivating in our day are putting them into a condition where the doing and standing of hard things becomes an extremely difficult matter. What we need for our generation is not a new nature nor a reversion to the human nature of three generations ago, when our pioneer ancestors faced the wilderness and the savages and all the awful hardships of early American life and often succeeded in living a long life of most successful accomplishment and real happiness in the doing of it, but a cultivation of our own powers of endurance and achievement. If we can but bring our young folks to enjoy the outdoor air and regular life with early rising, constant occupation, the spirit of attempting difficult tasks with confidence, healthy tiredness, plain food and plenty of it, approaching more closely the life that our grandfathers followed, such a mode of living will restore to us the physical power which the race had before our time but has now lost. And this

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may still be accomplished despite the fact that modern city life has made a great many people feel that they are not quite capable of doing all their ancestors did.

Here in a nutshell is the secret of bringing up young folks healthily. They need to think as little as possible about themselves, to get out in the air for hard exercise every day, no matter whether it rains or not, and of course snow must not keep them in and ice must tempt them out and then they will be in the best possible condition that they can be. They must have an abundance of air and exercise, several hours of it, at least every day. They must not take their exercise watching others play, but must take an active part in it themselves. They must get thoroughly tired every day of their lives, forgetting all about their feelings and eating simple things, but in abundance three or four or more times a day whenever they feel like it, unless they are over weight. And they must have a sufficient number of hours of sleep in which to rebuild their bodies and their minds. The nearer they are to little animals during their growing period the better for them in after life.

THE MEANING OF MENTAL HEALTH

This is what these talks are intended to teach parents, especially those who have been growing over-solicitous about their children, coddling them in various ways and suggesting all sorts of ideas that have made them over-anxious about themselves. As a consequence of these and similar faults in their early care many of our young have been made self-conscious and with a definite tendency not to use the energies they possess to the best advantage. They have lost control over themselves to a notable extent; they have not been able to stand the strains and stresses of life as before. They are tending to assume, to use the

words of Dr. MacFie Campbell of Harvard University, "an inferior attitude toward life."

With a little thoughtful care properly exercised during their formative period our children can be made ever so much more efficient, but also ever so much more capable of finding happiness in life. If the rising generation is miserable there cannot be much satisfaction in life for the older folk near them who are really interested in them. The irritable or "nervous" child is a source of worry and anxiety that creates a vicious circle of solicitude in the family. Yet the problem of preventing at least the worse developments of this family nightmare is not difficult if only faced from the beginning and met with the knowledge that is now available as to training in self-control, and such discipline of mental and physical powers as will assure that most precious of all possessions for life, "a healthy mind in a healthy body."

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II

THE NERVOUS CHILD

"As physical maturity is marked by the ability to produce offspring, so mental maturity is marked by the ability to train those offspring."

HERBERT SPENCER in *Education.*

* * * *

"And moderate cryings come not oft in vain
They stir a dull and clear a watery brain."

Pædotrophia; or the Art of Nursing and Rearing Children. Latin poem of St. Marthe, 1684; translated by Tytler, 1797.

THE NERVOUS CHILD

The earliest use of the word nervous in English was with the meaning vigorous, strong, possessed of good nerve power. In our time, however, as Plato said long ago of his own time (so that manifestly it has been a custom rather common whenever civilization was particularly developed), we have become more interested in disease than in health, and so the meaning of the word has been completely reversed. A nervous person nowadays is one whose nerves respond too readily to irritation, and who therefore has very little energy in reserve; and the possessor of such nerves as a consequence is exactly the opposite of strong and vigorous.

A nervous child is a particular example of the nervous person, deservedly attracting more attention because naturally we do not think of children as having in any sense, as yet, exhausted their nervous energy, nor are there any good reasons why the normally brought up child should have nerves that react too readily to irritation. On the contrary we have every right to expect that a child's nervous system will respond quite normally and maintain its equilibrium well, since it has not, as yet, been compelled to go through any of the crises of life or the wearing moments which would naturally be expected to set the nervous system on edge. Having nerves in the olden time meant having good control over one's powers. In slang we call this now having *nerve,* while having " nerves " in our day means being " jumpy " and inclined to irritability in the physiological sense of being over-responsive to factors that affect the nervous system in any way.

NERVINESS AND NERVOUSNESS

It is very interesting to trace the history of that word "nerves" and above all to note when the change in its meaning came about. It was during the latter eighteenth and early nineteenth centuries when women were supposed from their very natures to need but very little exercise, when indeed they were presumed, because of their sex, not to be able to indulge at all in any form of sport, and when by social convention they were expected to be rather languorous and inclined to faint on the slightest occasion for it, that the word "nerves" came to have its modern meaning of nervousness instead of nerviness, which had been the commonly accepted significance before. When women stayed to a great extent in the house, only rarely went out into the air and then only to walk quietly and demurely and never by any chance did any running or skipping and of course no outdoor games, then it was that they came to have "nerves."

In this set of historical incidents indeed we may find the secret of nervousness. The great majority of the people who are nervous in the modern sense of being irritable, over-responsive to things that affect them, are people who get out in the air very little and who exercise ever so much less than they ought to. Nothing makes the nervous system so inclined to be too responsive as the lack of exercise and air. It is clear that human beings acting as animated heat-engines, manufacture a certain amount of energy every day. Unless this is used up in the performance of external work it will inevitably be consumed within the system. One is perfectly justified in using the expression "short-circuiting," for that illustrates very clearly exactly the sort of thing that happens. The human system has no accumulator in which surplus energy can be stored for more than a comparatively brief time. We were meant

to use up the current energy that we manufacture every day, or at least during the course of a few days. The external work, which uses it up, may be represented by exercise, or by our heating of the air that touches us and abstracts heat from us, for heat is a mode of motion just as much as exercise, but there must be enough of our energy used up to keep us from being pestered by a surplus of it which then proceeds to act on the more sensitive portion of the organism, the nerves.

THE INFLUENCE OF THE CITY

Here is the secret of the ever so much greater frequency of the nervous child in modern times over its occurrence in preceding generations. The children of all classes but especially those of the better-to-do families, who are brought up in cities, have ever so much less air and exercise than the children of preceding generations. A hundred years ago less than one in five of our population was a city dweller, while now scarcely more than one in five is a dweller in the country. Children brought up in the country are out of doors most of the day, constantly using up energy both by muscular exercise and by giving off heat into the ordinarily colder air around them, so that there is no such thing as short-circuiting of energy in their nervous systems. City-raised children, however, spend most of their day in superheated rooms, often above 70 degrees, which is almost needless to say entirely too high for the real comfort or health of human nature. When they go out for exercise they are supposed to walk staidly with mother or their nurse, or perhaps to go for a jaunt in the family auto well closed in, or even to get their sole outing for the day by means of a ride in the park. They know almost nothing of the abandon of real sport. They sometimes play a little bit with the neighbor chil-

dren in the park, but even this is very mildly done and is not indulged in for long. It is all under surveillance, there is no spontaneity about it, and the idea of their getting into a perspiration over it is quite out of the question. Children, like ladies, apparently are supposed only to glow over their exercise.

No wonder that under these circumstances the readily excitable or nervous child has come to be an extremely common element in life. He is a representative of a class of children who do not sleep well, who have capricious appetites and do not eat well, who do not digest well. All these three go together. As the mathematicians say, they are functions of each other. Good digestion waits on appetite and sleep on both. No wonder then that they so often have a rather pale and sometimes somewhat pasty complexion, nor that they are likely to suffer from various skin troubles, are rather readily tired, easily frightened, entirely too responsive to irritations of any and every kind. As a consequence of these they are almost sure to be indulged because it is felt that they are not quite normal in health; and so they readily degenerate as a consequence of misplaced sympathy and the cultivation of their faculty for self pity—a faculty which every human being has ever ready for development—and come all too easily to be an example of that unfortunate genus, the spoiled child.

THE DESTRUCTIVE "DON'T"

Short of being the spoiled child type, children brought up in cities become a bundle of repressions and inhibitions. The word they hear constantly is "don't run," "don't make a noise," "don't play in the dirt," "don't rumple your clothes," "don't play with water," "don't leave your toys around," because of course there is not room in the constricted quarters of city dwellers to have many toys

on the floor, "don't jump," "don't yell," "don't," "don't," "don't." Is it any wonder that the city child looking at the colored children playing in their yards dirty and happy, having a good time, said: "Mother, I'd like to be a 'nigger.'" All the things that the child is told not to do are prompted by nature and represent nature's efforts to bring about development of muscles and bones and all the other parts of the body. Nature begins, even in the first few weeks, to stimulate the child to exercise its muscles. By the end of a few weeks it is making a whole series of movements just for the sake of making them. The exercise and development of muscles which come as a consequence are just part of the game of life. In the course of a few months the child would seem to be on springs. It is easy to understand the nickname of "springsy" applied to so many of them. While awake they are constantly moving hands and legs. Of course they disarrange their clothes, and so if they belong to the better classes they are bound up in various ways to prevent this; but nothing could possibly be better for the little one than just the free exercise of its muscles.

THE NECESSITY FOR HEALTHY FATIGUE

Every bit of prevention of activity, every discouragement of the taking of exercise is the worst thing that could possibly be done. Nature evidently intended that the little one should tire himself out thoroughly every day and sleep and eat better as a consequence. He is developing not only his muscles but his nervous system. Nervous connections of all kinds are made and trained to respond to each other and the result is a nervous system that uses up its own energy every day and is thoroughly under control. As time goes on the city child is in the house most of the day and gets a chance for a walk in the park only on good

weather days and for at most an hour or two at that. If there is any play it is usually with older people, it is lacking in spontaneity, and there is no encouragement for personal initiative or incentive. The country boy makes his own toys, many of them, his wagon of spools and a cigar box, makes his own sled and ever so many things, and in doing so, of course, exercises initiative and ingenuity to a marvelous extent. In families in the country where there are a half dozen of children they educate each other, help in the bringing up of all together, and above all provide the most natural opportunities for the exercise of forbearance, self-denial, self-control, thoughtfulness for others and the other virtues that are so much harder to secure the exercise of when the child is always with grown-ups.

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RURAL DWELLERS LIVE LONGER

Probably the best possible evidence for the value of the outdoor active life is to be found in the higher rate of mortality in the cities at all ages in most diseases and above all in the greater expectancy of life at nearly all ages among country dwellers. Dr. John Brownlee of the British Medical Research Council in a recent report to that body gives the evidence in support of the shorter life

of city populations on the average. This is taken from the latest English Government tables of the expectancy of life. These show that this difference in favor of the longer life of the rural dweller is to be found at all ages. Even at the age of fifteen when perhaps it might be thought that living in the country could not have made very much difference—since city boys and girls get out not a little, and especially in recent years have been encouraged more and more to be out in the open in playgrounds, parks and the like—the country boy or girl has a two-and-a-half-year greater expectancy of life than his city brother or sister of the same age. This proves to apply not only to the child of the large city, such as London or in England, Liverpool, Manchester and the like, but also even for the county boroughs where so many of what we consider the disadvantages of city life would seem not to be present. Country life particularly is important for nervous children, and every sacrifice that will secure them this is amply justified.

THE SCHOOL AND THE CAMP

Where the children cannot be absolutely brought up in the country at least they may spend a good deal of time there, and parents can shape the policy of family life as much as possible in that direction. It has come to be the custom now, especially where families live in apartment hotels or in rather closely confined apartments, to send their children to boarding school much earlier than used to be the custom; and when the boarding schools are situated out in the country, as they usually are, this is often a very valuable auxiliary for the health of the nervous child. No place is probably more unsuitable for the raising of the nervous child than the confined purlieus of the modern apartment hotel or apartment house. One may deprecate the loss of home life for these children, but city apart-

ments have put an end to home life, and even the gathering of boys of seven and eight into academies and seminaries out in the country may be better than a counterfeit home of the large city.

Camp life is ideal for children in the summer time and the freedom of the woods and the waters and the company of those about of their own age makes the best possible summer interlude between two school years. The nervous child is particularly likely to be benefited by this, for as a rule the more call within reason which is made on his body and the less on his mind, the better. Association with his elders is not good for him as a rule, while association with those of his own age is usually the very best thing that could happen. Camp life is quite as valuable for girls as it is for boys, and physicians in recent years have had ample opportunity to see how much good is accomplished for the nervous girl by two or three months of life in the open under camp conditions.

THE WEARINESS OF THE UNTIRED

Outing is the most important factor in the proper bringing up of children and it is all important for the nervous child. Even perfectly normal adults become nervous and irritable and over-act if they do not get opportunities to be out in the air. At the end of a rainy day or stormy day when people have been in the house all day they get on one another's nerves rather readily, because nerve impulses have not been flowing normally by exercise, and there is a certain accumulation of nervous energy that readily leads to explosions. In children this is noted still more, and any mother realizes how at the end of a day in the house the children are almost impossible to get along with, they over-react to every stimulus, are irritable and hard to manage in every way. Children themselves will often complain

that they are "tired," but what is really the matter with them is that they are not tired. They have not had a chance to use up the energy which is available in them and it is short-circuiting and disturbing them. These examples, so familiar to everyone, make it easy to understand what happens to the nervous child, so much more prone to over-react and to be irritable whenever life does not present many opportunities for being outside and for such hearty, healthy, spontaneous play as uses up energy, and at the same time affords pleasure.

DREAMING ABOUT FOOD

No wonder that they do not sleep well and that they are restless and dream often and are disturbed by their dreams whenever they do not get out much, and that their appetite is disturbed and is capricious. Air is the most important tonic stimulant for appetite that we have. People who are outside much eat heartily without any necessity for artificial stimulation. On board steamers people eat five, six times a day, digest well and yet sleep most of the day and then sleep very well at night. Indeed, many of the older nervous children do not sleep well at night because they do not eat enough. Nothing has so strong a tendency to keep people awake as being hungry, and nothing induces dreams so readily as emptiness of the digestive tract. Whenever dreams are about food they are almost sure to be the result of hunger. Older children who do not sleep long enough in the morning will often do so if they are given a drink of hot milk just before going to bed, and if they have the tendency to wake earlier than seems good for them it is well to have a cup of hot milk prepared for them and then tempt them to go to sleep again, for this will often prove a most satisfactory somnifacient.

After air and exercise the most important factor in the regimen of nervous children is proper food. A great many of them are finicky eaters, capricious about this and that, likely to refuse the most nutritious things and to want all sorts of food materials that are not good for them. Of course children, and that means practically up to fifteen years of age, ought not to be given tea or coffee, and these fluids, which are really drugs, must above all be kept away from the nervous child. Discipline in taking the simple foods—milk, eggs, green vegetables, whole wheat bread and butter, crackers, the cooked cereals and simple cake and puddings—is an extremely valuable remedial measure for these children. A gain in weight will often mean a great lessening of their tendencies to nervousness.

It is simple things of this kind which can very often be done for the child to make it ever so much better than would otherwise be the case, and to prevent the formation of such habits in its nervous system as would prove disturbing when it is older. Tendencies to nervousness can be almost completely overcome by proper training when young, and it is the simple knowledge of what to do and not any marvelous curative process that will make these children ever so much better than they would otherwise be.

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III

THE SPOILED CHILD

"Education of some kind should begin from the cradle."

HERBERT SPENCER in *Education.*

* * * *

"God knoweth my Lady Elizabeth hath great pain with her great teeth, and they come very slowly forth, which causeth me to suffer her Grace to have her will more than I would."

From a letter written in 1536 by the governess of Princess, afterward Queen Elizabeth, to Lord Cromwell.

* * * *

"'Tis not good that children should know any wickedness."

SHAKESPEARE—*Merry Wives of Windsor.*

THE SPOILED CHILD

When anyone speaks of a grown-up as behaving "like a spoiled child" we know that the person referred to has displayed lack of self-control, selfishness, and has allowed emotions to dominate his reason. Few of us probably realize that many persons of this type may be so because faulty training in childhood resulted in a failure in these individuals to grow up to understanding and unselfishness in their social relations. Spoiling may be commenced very early; it is no exaggeration to say that a child may be potentially spoiled before he is even born into the world. Being a "good baby" is really not so simple and so easy an accomplishment as it might appear. The human family is a complicated, coöperative society and we cannot accomplish even the simplest things without some help and assistance from other men and women. And the complicated task of making the intricate biological machine known as a new baby run so smoothly that it is at the same time noiseless and efficient, is also an achievement impossible of attainment without intelligent coöperation and help from many sides.

THE IMPORTANCE OF ANCESTORS

If his mother through well-advised care and feeding of herself has equipped the infant with proper food products before birth, and if his grandfathers and grandmothers were the kind of stock they should have been, then this task will not be so difficult. The nerve specialist who told a patient, "In order to be cured you really should secure a different grandfather," was purposely making an Irish bull. We are partly what generations of ancestors have made us, and fortunately for us, the ten-

dency is rather toward normalcy than otherwise. Yet, latent in the nervous organization of all infants are undesirable traits that may be brought to the surface through the imprudence of foolish or careless parents.

More and more attention is being paid nowadays to the care of the unborn infant through our newer knowledge of the necessary care of the mother during pregnancy. Even the question of diet assumes a new importance when we reflect that in Japan women who suffer from the disease characterized by a form of neuritis, known as beri-beri, give birth to children who also develop the disease when nursed on their mother's milk. Nutritional diseases in calves born of cows that have fed on inferior hay has been noted by writers on animal husbandry. The old doctrine that the child before birth could be marked by fright or ungratified desires in the mother is no longer held. But some reputable writers are nowadays debating whether or not great emotional strain in a mother might not so disorder the function of those glands of the body which by their secretion influence growth, that deformities dependent on incomplete growth could be brought about in the unborn infant's tissues. Especially in England some writers think that a supposed increase in these deformities since 1914 may be attributed to the great emotional strain among expectant mothers while the world was at war. In any event, there is some evidence being adduced to prove that heredity may affect the body of the infant through the food which his ancestors have eaten, as well as through the mental traits of those progenitors.

THE EFFECT OF DIET ON RACE

Professor McCollum has been investigating the effect of diet on racial development. He has not been experimenting with men, of course, but with albino rats. These

little animals reach maturity in six months and raise families before that age. Because they are able to mature in such a short time, Professor McCollum has had an opportunity to study the life history of several generations of animals which he had fed on various foods. By using for breeding purposes rats which for a couple of generations had been deprived of green vegetables and milk and similar vitamine-containing foods, a stock was produced much inferior in size, appearance and even in instinctive intelligence when compared with another stock whose ancestors had been given proper food. So it is possible that a man, or at least, a child, may easily be or not be what he should be because of the food habits of his ancestors, even if he is not in other respects exactly like an albino rat.

When Robert Burns moralized poetically about mice and men he little thought that scientists of a later day might dogmatize dietetically on the same or a similar subject. But few investigations of recent years are more important or more enlightening to students of nutrition.

THE NEED OF PRENATAL CARE

The moral of such and similar studies is that the mother who is about to bear a child should have proper physical examination, proper diet and proper advice from a physician who is experienced in "prenatal care" all during the period of her pregnancy and not just a short time before delivery, as is so frequently the case. More mothers of the 20,000 who die annually in childbirth in the United States will live, and more babies of the 100,000 who only survive a week after birth will be saved when this practice is universally followed. And those children

who do survive will be as a result a healthier and a saner stock.

THE ORDEAL OF THE NEWBORN

The newborn infant comes into the world after a very hard and probably very painful ordeal. Providence has mercifully not allowed us to remember our experience in being born, and even Thomas De Quincey, whose recollections went back to days of infancy, did not venture the assertion that he remembered the ordeal of his birth. The hours of physical punishment which a baby undergoes during nativity brings him into the world in a condition of considerable physical exhaustion. Then even while thus exhausted he is obliged to begin to literally live "on his own" and use an entirely new set of organs which he has never used before. If we could know and talk about it, the fear of birth would probably be even greater than the fear of death. It is no wonder, then, that the newborn infant sleeps almost in a coma for the first couple of days following his arrival, for this sleep is necessary if he is to have proper rest from his journey into the world.

The child during the first few weeks of life will sleep practically all the time excepting when he is taking food. He should be encouraged to do so by placing him in a quiet, not too bright, though well-ventilated room. At this time the infant will not be easily awakened, although very soon care will have to be taken not to arouse him. The very deep sleep of later years is characteristic and differs from the rather restless slumber that may come after the first week or so.

THE CONGENITALLY NERVOUS INFANT

There are certain children who are "nervous" and show nervous symptoms very soon after being born. This is the type of child that regurgitates food, is frequently rest-

less and under weight, cries a great deal, arches the back when crying and sometimes has severe attacks of colic and perhaps eczema. The intestinal digestion of this kind of an infant is very subject to disturbances and frequently the mother is unwisely advised to give her baby artificial food instead of breast milk, believing that the latter will agree with the infant a little better. Such a course is usually out of the frying pan into the fire. However poor in quality the mother's milk may be, it is always to be remembered that it is probably after all the most suitable food for the baby, and moreover that in many of these children the fault lies not with the food but with the infant. These babies do not know how to use their new organs; they need medical and nursing care and the mother should have very good conservative medical advice. It may be that the mother's milk needs to be supplemented; rarely does maternal feeding need to be abandoned. Much can be done to make such children comfortable and avoid having them malnourished. Time and patience are the two specific ingredients necessary to cure them. Children of this type are often called "spoiled" babies because they cry a great deal. Usually they are more neurotic than "spoiled" and are actually or potentially sick. If at the end of two to four weeks this type of child almost immediately after feeding vomits a large portion of the milk given to it, and if it continue to do this, then a really serious condition may develop due to a spasm of the muscular outlet of the stomach, unless prompt medical aid is given by a physician experienced in children's ailments. But mild degrees of regurgitation may exist in vigorous infants who have overloaded their stomachs and need not necessarily mean that they are of the nervous type.

HOW TO SPOIL THE INFANT'S NERVOUS SYSTEM

The child's brain grows very rapidly after birth and continues to grow rapidly until the age of five or six. Especially during this early period parents and friends must remember that the baby needs rest and quiet. Jumping him up and down, watching him blink at lights, using him as a toy—all these practices may seriously injure the delicate nervous mechanism just beginning to develop. In the later months and after the first year, playing vigorously with a child just before his bedtime, exciting him and then banishing him to bed in a storm of crying, is of course, the opposite to what is good for the child. To suggest that such recreation as he has at this time is a part of the ceremony of going to bed, and to repeat that suggestion in songs, or even in games, is a useful expedient, since the induction of sleep is, after all, a matter of suggestion. The existence of lullabies among practically all peoples shows that inducing sleep in this manner is an old and recognized custom. To begin this program, however, with a child accustomed to rough boisterous play will probably not meet with much success at first. It is easier not to "spoil" children than to unspoil them, so the mother should commence this routine when the baby is quite young.

THE BRINGING UP OF PARENTS

Spoiling, of course, involves a display of wilfulness and often selfishness. It is natural for a young child to be wilful and also probably to be selfish. Children have to be taught to consider others. They should never be allowed to realize that either the justice or tenability of a father's or mother's decision is open to question. This imposes a high standard of living and thinking and talking on the parents—but that in itself is far from a disadvan-

tage. Mr. Herbert Hoover has said wisely: "A great many parents need bringing up." Displays of anger or irritability by a father or mother are the very worst possible example for a child of any age. The sense of injustice is acute in the child; he is, of course, very prone to self pity.

THE CRYING CHILD

The crying child is, to be sure, a great annoyance, but angry words cannot help him to stop crying. Sometimes he is unable to stop; even fear cannot compel him to self-control sufficient for the purpose of checking his sobs. The cause of the crying itself may be trivial, but if he should be in the wrong, it will be sufficient to remove the child to a quiet corner and leave him to his own devices. Soon he will have finished and almost as soon again have forgotten about his grief. But if he is crying because of a real grievance, do your best to remedy any injustice; or promise to remedy it, and *keep your promise.* Make the children realize that you mean what you say, and that your judgments are wise. It is possible to accomplish this without harshness or lack of tenderness toward your children. Usually it imposes a task of self-control on the parents that carries with it its own reward.

THE DISOBEDIENT CHILD

If a child resists, or is disobedient, as for instance in being undressed for a bath, or when being taken upstairs, do not spend time in coaxing or pleading with him. Tell him quietly, even if he is not even a year old, why you wish him to do this certain thing, and then finally but gently proceed to do it, and get it over as soon as possible. This will avoid long-drawn-out emotional ordeals for both the child and mother; after awhile the child will realize

that obedience is the easier way. Children are the most impressionable beings in existence. They are also the most imitative. They are best trained by utilizing these qualities to their advantage and not as weapons against them. To teach the child how to realize and how to observe the personal limitations which are necessary under

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even ordinary conditions of social life, without at the same time forcing him into a rigid pedagogical groove is the problem which confronts every parent.

CURBING ACTIVITY BY "DON'TS"

One reason why children seem bad or spoiled is because they have been too much with adults and have not been taught to amuse themselves. The vivacity and exuberance of childhood manifests itself in outbursts which frequently annoy older persons and call forth a torrent of "don'ts." The child soon finds that if he attempts to do or say things impulsively and without consideration some older person is certain to interfere in some way with what seems to the child only reasonable pleasure. Very soon the child does not attempt to imitate anything; he relies on his mother or his nurse for everything in the

way of amusement, and after awhile not only relies but insists on their coöperation. The end result of this is that he does not learn how to play as normal children play, that he loses initiative, does not utilize his wonderful child imagination, becomes entirely dependent on adults for amusement and cries if left to his own devices for only a little while.

The natural and vehement stream of energy of the child cannot and must not be curbed or, I might say, damned by " don'ts "; it can instead be easily diverted into such constructive channels of play as playing at doing things, especially things to help mother and father. This will give the child the outlet he desires to display his initiative and be " busy " without being annoying.

THE PROCESS OF UNSPOILING

If a child has been spoiled it is probable that someone has devoted time and attention to the work of spoiling him. The same measures that prevent spoiling children will also serve to unspoil, though the work is not an easy one. Many a violent outburst and emotional crisis will probably have to be undergone before the child learns self-discipline. And this is an accomplishment that is best of all taught by personal example of the teacher. Truthfulness and consistency of action are also necessary in the parent or nurse who would accomplish anything with these children. Threatening a child with a penalty for disobedience and then not fulfilling the penalty; becoming excited when a child is impertinent and replying in an angry tone—these are fatal mistakes to avoid in the process of unspoiling. Never allow the spoiled child to see that he is worrying you. When a child has at last learned to come promptly when called and to always

answer when spoken to, the process of unspoiling may be considered well under way.

The spoiled child belongs to no single social stratum. Some of the worst spoiled children come from poor homes; some of the least spoiled may be found among the children of the very wealthy. Spoiling is a condition chiefly caused by a combination of bad example and bad training, rather than by neglect. The wealthy child who is allowed to kick his nurse, or the poor child who has been permitted to strike his mother, are equal in their misfortune if not in their social positions. Both start life with a mental and moral handicap.

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IV

MISUNDERSTOOD AND DIFFERENT CHILDREN

"We are in pain to make them scholars, but not men; to talk rather than to know, which is true canting. The first thing obvious to children is what is sensible; and that we make no part of their rudiments."

WILLIAM PENN in *Some Fruits of Solitude.*

* * * *

"Pardieu! les plus grands clercs ne sont pas les plus finis."

"Indeed the greatest scholars are not the wisest men."

REGNIER. (Circa 1600.)

MISUNDERSTOOD AND DIFFERENT CHILDREN

All parents know that they have children that are different from others, and this is written with due deference to individual opinions because it does not deal with the conventionally different children, but with the comparatively rare exceptions to the kaleidoscope of child life. There are a few children born even to very ordinary, matter-of-fact, everyday parents who are destined to be the leaders of thought or expresion in the next generation. Very often these children are misunderstood. Sometimes for a time, because of misunderstanding they are thought to be backward or lacking in some important quality of human nature, will power, or persistence of purpose, when they are really only finding themselves. Not infrequently there are digressions from the normal in the physical constitution of such children; they are sometimes weaklings and more rarely grow very rapidly when their time for growth comes, and there is a disparity between the progress of their bodily growth and their mental development that is disturbing for parents.

They are often set down as nervous children, and they are nervous in the sense that they react more easily to certain things in their environment and are more sensitive than other children. They require special care, or at least attention, and the ordinary child caretakers as well as teachers, tutors and the like often fail to get along with them at all. Because of this it has seemed good to write a special chapter on these "different" children, so that parents may be put in a position to understand them a lit-

tle better than would otherwise be the case when their special peculiarities become manifest.

The old story of the ugly duckling, despised in the family of the ducks because of its ungainly walk and its awkward lumbering gait as it grew up, but who proved really to be a magnificent specimen of swan when he had developed sufficiently to realize that his medium was the water and not the earth, shows very clearly how long this problem of the different child has been before the world. The popularity of the story is a demonstration of the fact that these different children have been a matter of solicitude probably from the early days of the history of our race. We cannot hope to obviate all the difficulties, nor to eliminate that ever-recurring failure to understand each other which has characterized the relations of fathers and sons for ever so many generations (and so far as we can judge from present-day indications is likely to continue to do so for many generations to come) but at least something may be done to avoid the worst mistakes in this regard by calling attention to some differences from the average type that may be found in the progress of mental growth in perfectly normal or perhaps even unusually gifted children.

HOW WE SENTIMENTALIZE OUR CHILDREN

This chapter does not represent a plea for more intimate relations in the sense of much more association between parents and children than is the rule of good family life, though a good deal of ink has been spilled in recent years recommending this. Parents should influence children, should be with them at certain times, should secure the confidence of their children and keep it, if they can; but it would be a mistake to think that they can do them good by being with them most of the time. Chil-

dren above all need to play. Their playmates should be about of their own age and there should be as far as possible complete abandon in their play. They should forget themselves and play just as hard as they can in competition with those of their own years. Of course this advice is for normally healthy children. Their play hours should not be spent with adults and adults that have much to do with their play should learn to suppress themselves to a great extent, leaving the initiative to the children. Later in this chapter, we shall cite the example of Francis Thompson, the English poet who died a few years ago, but just now we want to quote a very wise expression of his with regard to the association of grown-ups and children, even including parents, that every parent ought to have in his or her notebook. We must not make the children less childlike, for they have a right to their childhood. There are only a few grown-ups, like the author of *Alice in Wonderland*, who can enter into the hearts and minds of children without sophisticating them and making them almost inevitably that abomination so common in our time of small families, the old-fashioned precocious child.

Francis Thompson said: "We, of this self-conscious, incredulous generation, sentimentalize our children, analyze our children, think we are endowed with a special capacity to sympathize and identify ourselves with children; we play at being children. And the result is that we are not more child-like, but our children are less childlike. It is so tiring to stoop to the child, so much easier to lift the child up to you."

There are certain phases of physical life in children which make a very great difference in their mentality and disposition and which it is important for parents to realize and properly appreciate. Children who have suffered

from some serious disease which made them delicate, and which kept them all during their infancy just on the ragged edge of life, are very likely to have anomalies of physical growth and mental development afterwards. It is important for parents to understand that such anomalies must not be taken to mean anything more than nature's inability to catch up for a time with the normal course of development. Such children have often been spoiled in disposition by being over-yielded to when they were sickly. It is easier to not spoil them than to unspoil, and so far as possible discipline must be maintained. On the other hand divergences from the normal, that are due to physical causes, must be properly sympathized with.

"FORCING" THE RAPIDLY-GROWING CHILD

Rapidly-growing children in their early teens often run into conditions in which their mentality is of very slow development and as a consequence they seem to be defective. It is extremely important when children are growing several inches a year not to push them in any way at school, nor to permit them to become involved in competition for prizes and above all, not to allow them to be much disturbed by examinations. If they have a reasonable amount of intelligence it is, comparatively speaking, such an easy task for them to make up for whatever they may seem to have lost at this time, that parents should be lenient with them, being quite satisfied if their physical growth is attained without disturbance of their bodily health even to allow their minds to lie fallow for a time. In some of these cases a very rapid striking intellectual development, quite corresponding to their physical development, has followed their cessation of growth when nature once more has had some surplus energy to afford for the mental life.

Unfortunately parents are sometimes very much disturbed over the apparent failure of their children to develop mentally commensurately with their years and their physical growth at this period, and sometimes their feelings in the matter are communicated to their children, often indeliberately, at times almost unconsciously, and this makes for the development of a solicitude about themselves unfavorable to health at a rather critical time. Parents, therefore, should be prepared for some such disturbance of mental development and be quite ready to await the issue of some years at this time with reasonable equanimity. There are many cases on record now which illustrate very thoroughly this cessation of mental development in rapidly-growing youths of both sexes, in which there followed a very satisfactory development of intelligence, sometimes even to positive genius in the course of a few years.

THE UNMAKING OF A DULLARD

Probably the most typical instance in this country is that of Professor Shields of the Department of Pedagogy of the Catholic University. He has told the story in an autobiographical volume entitled "*The Making and Unmaking of a Dullard.*"

From the age of nine to nineteen he was considered by all about him a hopeless dullard. His was a case of dullness that arose from alternating phases of physical and mental development, which at that time were not understood as they are today. "The physical environment of my childhood and youth was all that could be desired," he wrote; "I was born and raised on a large farm in one of the most picturesque spots in the Park region of Minnesota." At the age of six he went to school, and until his ninth year his childhood differed in no important

respect from that of other children. Indeed, he seems to have been rather a bright child up to that time. "I had finished long division and was working in fractions before I was nine years old." His reading was at first so good that he was promoted too rapidly, and the discouragement of finding himself pitted against children who were older than himself, and using a text-book that was beyond his powers, was the first mistake made. "The sense of failure left me with a deep and abiding sense of shame and discouragement." The other boys teased him and played tricks upon him. "I think I must have been growing very rapidly during this time and probably ceased to make progress in all the school subjects."

At the completion of his ninth year he was taken out of school and put to work on the farm.

"My condition, from my ninth to my thirteenth year was due . . . . . to a phase of abnormally rapid physical development. . . . . At thirteen years I weighed one hundred and sixty pounds. At fourteen I was my present height, five feet ten inches, very strong physically, and could do a man's work on the farm. My nerve energy must all have been used in building up my physical frame. The tension was so low that there was not even a good muscle tonus."

In some degree a condition similar to this is noted in most children during their period of growth in the early teens and represents the familiar "awkward age" which is observed in both sexes. These poor things who have grown fast cannot properly accommodate their muscles to their rapidly lengthening bones, and they have to be continually learning new problems of adjustment of muscle to its movements so that it is no wonder that they are awkward. They must be laughed at gently, even though sometimes their awkwardness may lead to the breaking of

fine crockery or cut glass, or to other family catastrophies. They must not be ridiculed, for they are sensitive and time will cure their symptoms. Fortunately the sex change which occurs about this time has of itself a very decided influence in making them take more care of themselves, and make renewed efforts to get over their awkwardness and their general slouchiness.

In Professor Shields' case this awkwardness and lack of power to use muscles properly went much farther than is the rule. He could not even use his muscles of articulation properly. As he said himself, "I spoke but seldom and when I did attempt to talk even the members of my own family found some difficulty in understanding me. The boys used to mock me so that I grew afraid of the sound of my own voice. I would not dare attempt to hum or whistle a tune."

The family tried faithfully to give him the opportunity for mental development. During his rapidly-growing years there seemed no hope of this, however. As he says himself:

"When I was thirteen I was sent back to school. My family was anxious that I should be prepared for Confirmation, and they still entertained a lingering hope that I might learn enough of the three 'R's' to get along on the farm. This second attempt was a failure although rapid physical development had practically come to an end, and if I had been handled properly my mental life might have been awakened at that time. As it was, the experiment proved to be one long-drawn-out humiliation. Each day recorded a fresh failure and increased my discouragement proportionately. The experiment was abandoned after a few months.

"On my return to work on the farm the realization grew upon me that I was not as other boys. They had

brains and talents which I knew I did not possess. I could plow and mow and reap and sow, but I could not imagine what the world was like to those around me who were smart and used to read the papers and keep track of the march of events in the great outer world."

AN OMINOUS CONVERSATION

In the midst of this discouragement there came one of those unfortunate incidents of revelation of opinions supposed to be kept inviolately secret which are so likely to cause poignant anguish. He was brought to understand that his mental condition was hopeless and that the only thing that could ever be expected of him was manual labor. It is easy to understand how much of mental suffering this must have caused to a boy in his early teens:

"One day, when I was about fourteen years old, I was lying on a bench outside the dining-room window resting after dinner, when my father and mother and my uncle, who was visiting us for the first time within my memory, entered the dining-room. Without intending to eavesdrop I overheard their conversation. My uncle was saying as they came in: 'It's a shame that you don't try to do something for poor Ed,' and mother replied: 'We have done everything that we could think of, but it seems hopeless. The teachers sent him home from school when he was nine years old; they said he could learn nothing but vicious habits from the bad boys who attended school. We sent him back to school last year and the teacher did everything in her power to help him, but after three months gave it up as useless.'

"This was the first intimation I had of the reason which led my parents to keep me home from school. Although I knew in a general way that I had no talents such as other boys possessed, nevertheless my mother's

words came to me like a sentence of condemnation and they crushed me utterly. I slunk away from the bench like a wounded animal and hid myself in the cornfield.

"During the two years that followed, the gloom and despondency that settled over me were deep indeed. I used to look at the workmen on the place with a feeling of reverent wonder, for they had brains and were as other people, and I could no more imagine what the world looked like to their eyes than I can imagine what this world of eager, struggling humanity must be like to the angels.

"I made no attempt to read; I forgot the multiplication table; and I do not think I could have written my own name when I was sixteen years old. . . . ."

SOME CELEBRATED DUNCES

Yet this apparently hopeless dunce in the course of a few years, once his intelligence began to awake, much more than caught up with the education that he would have received in the course of ten years, and then proceeded to prove himself a deep original thinker and thorough-going investigator whose name became very well known in educational and psychological circles throughout the country.

The derivation of the very word dunce is typically interesting in this regard. It was originally applied under the form of Dunsmen to Duns Scotus and his followers. Scotus was a very brilliant scholastic philosopher whose teaching is still recognized as containing some very thoughtful solutions of deeper philosophic problems. So few people were able to understand him, however, that a great many concluded that there was nothing to understand, and so they called himself and his followers Dunsmen, which was after a time shortened to dunses. In his own generation, Duns Scotus was known as the subtle

doctor, because of the nicety of his distinctions, and yet his name has come to be the synonym for lack of intelligence. Another of the great philosophers in the medieval period in the generation before Duns Scotus suffered a like fate of misunderstanding during his earlier years at least. This was the famous Thomas of Aquin, known also as St. Thomas Aquinas, who was so slow in his classes in his younger years because of the thoroughness with which he searched out the ultimate reasons for things, that he came to be known as "the dumb ox." Fortunately his great teacher, Albertus Magnus, the only scholar with whose name the epithet great has become so associated that most people think of it as representing his family name, appreciated Aquinas and declared that the bellowings of that "dumb ox" would be heard throughout the world for many generations.

Occasionally there comes a period of lassitude and incapacity for mental operations between twelve and fifteen that is often a source of worry to parents. It is surprising how many stories we have of people who later on in life amounted to something who at this period were a source of very severe solicitude to parents as regards their mental state. Sir Walter Scott has told the story of his own neglect of his studies while he was reading romances and failing to get on at school, and of his falling to sleep over one of the story books and being awakened by a drop of water falling on his face, only to look up and find that it was his mother leaning over him in tears because she felt that he was neglecting the more important things of life. The great Professor Stokes of Dublin, probably the best authority on heart and lung diseases in the first half of the nineteenth century, who taught the medical profession of his time many things of great value, and who indeed is one of the noteworthy pioneers in the modern diagnosis

and treatment of heart and lung diseases, tells a rather similar story of himself, and of how it aroused him from an apathy with regard to studies which was creeping over him and might have proven the beginning of an unfortunate habit of mind.

THE GREAT POET WHO FLUNKED IN MEDICINE

It may be a great satisfaction to be the parent of a genius, once the genius has properly developed, but it must not be forgotten that very often geniuses are in childhood likely to make their parents very uncomfortable about them. This period of discomfort may extend well beyond the time of childhood into adult life while the genius is finding himself. There is probably no story that better exemplifies this and shows how poignant the suffering can be than that of poor Francis Thompson. His father was a small-town physician in England, and when Frank did not get on very well at college and seemed to have no desire for any other vocation his father transferred him to a medical school. Frank stayed there for four years and never passed but one examination. He had no liking at all for medicine, and yet somehow or other could not bring himself to tell his father that frankly, and continued to go to school, though he attended neither lectures nor recitations nor medical school exercises of any kind, and pottered away at his literary reading and his poetic thinking with occasional writing of verses which, as a rule, he tore up. At the end of four years he was transferred to another medical school where it was said the examinations were much easier and where it seemed quite sure he would get through if he gave any time at all to the work. Here Frank did not even go up for the examinations. At the end of these seven years he was no nearer a determination of what he should do than he had been before. His father did

not want him to do nothing around home and, as a thoroughly practical man he did not think that Frank's scribbling of poetry meant anything, he wanted to see him do something. He forbade him to stay at home, then, where his mother would have taken care of him in spite of his tendency, apparently, to do nothing, and so Frank took up his life of vagabondage in London. He made a few pennies by sweeping street crossings or selling matches, and with these succeeded in feeding himself, and he slept in barrels and boxes whenever there was not a friend to invite him home, or whenever some piece of good luck had not given him the price of a night's lodging.

His father had left a sum of money with a friend in London that Frank might draw on in case of necessity, but Frank refused to have anything to do with the family and continued his vagabond life. Occasionally a friend would fit him out with a suit of clothes a little better than his ragged raiment, as it necessarily came to be in his tramp life, and sometimes a windfall of something to do for a newspaper or the sale of a poem would help him out for a time. It is not surprising that under the circumstances he dropped into taking opium, and that finally he came very near ending it all with an overdose.

His father said afterwards: "I understand now that Frank's scribbling is looked upon as some of the greatest poetry of our generation. But how could we poor folks at home know anything about that during the days when the editors had not yet come to recognize the value of Frank's poetry or appreciate his genius? We would have been willing to do anything we could for the development of any powers in him that had any promise, but it was impossible to understand him and recognize that these apparently sterile years represented the incubation period of a real poet." There is the difficulty that has recurred over and

over again when the father has been a practical man, a physician, a banker, a merchant, or a lawyer, and the son has had no aspirations after the practical life at all and has been intensely bent on some mode of æsthetic expression with the brush or the chisel or the pen. Unfortunately many of them who seem to have the aspirations prove not to have the talent, and they waste years in toying with some art or with the writing of poetry to no good purpose at all, never accomplishing anything. These are the risks of parenthood and they must be taken for better, for worse, and there must be sympathy for whatever has any faintest inkling of promise in it. There must not be encouragement of anything like laziness or lackadaisical Bohemianism, and there ought to be above all understanding and little insistence on mere practicality to the exclusion of the finer ambitions in planning our children's careers.

EVIDENCES OF GENIUS IN CHILDHOOD

It may possibly be thought that after all there is very little need for parents taking this subject to heart, since geniuses are comparatively rare and genius that develops in very early years ever so much rarer. It might be well to know, however, that most of the men who have been great writers, artists and musicians particularly, have shown signs of the development of their genius rather early in life. A recent investigation of the subject has shown, for instance, that out of some sixty of the greatest artists of history more than forty of them, that is more than two out of every three, gave definite proof of their genius before they were fifteen. Almost the same thing is true as regards the poets. Goethe was only seven when his talent became manifest, Victor Hugo was even younger and was called *un enfant sublime,* like Pope he lisped in

numbers and the numbers came; while Alfred de Musset was under fourteen when he wrote his first verse. Of some sixty poets thirty-eight displayed their talent before twenty. Of twenty-eight novelists twenty-one had revealed something at least of the genius that was in them before they were twenty.

It is among musicians particularly that very early manifestations of the bent of their genius have been noted. Out of forty musicians, the details of whose lives have been carefully collated with the idea particularly of bringing out how early their talent was revealed, thirty-eight showed a decided taste and actual talent before they were twenty. Curiously enough the greater the genius of the musician, the earlier his genius manifested itself. Mozart, it will be recalled, was only five when he surprised his music-loving family by his musical powers. All the other great musicians of the eighteenth and nineteenth centuries followed this rule. Beethoven, for instance, Mendelssohn, Shubert, Schumann, Auber, Weber and Cherubini had all shown very clearly their talent and taste for music before they were twelve years of age.

GENIUS NEEDS NOT CODDLING BUT SYMPATHY

It is extremely important then for parents to be ready to recognize special talent in their children and unfortunately sometimes it is the parents of genius who make the most serious mistakes. The tendency, of course, is for parents to over-estimate their children and to take the most mediocre of talent for indices of budding genius and often spoil the life of a son or daughter by allowing years perhaps to be spent in the cultivation of a supposed talent which really represents only a very commonplace inclination for the art in question. It is not easy always to make the decision, but it is better that ninety-nine dullards

should have been coddled rather than that one genius should have been hampered on its path to greatness. The only consolation in it all is that perhaps the very hampering and placing of difficulties in the path serves to bring out the genius better than would otherwise be the case.

While we have quoted examples of the children that are different from among the boys, it must not be forgotten that they may also occur among the girls. The opportunities for expression afforded to women in recent years have shown very clearly that there may be as many geniuses among them as among their brothers. Whether the geniuses are of a different order or not remains to be seen from further developments. Girls may be, however, just as much a source of solicitude to parents as the boys in this regard and just as much effort will be required to understand and sympathize with them properly, yet without spoiling them by over-indulgence or by encouragement in any way of mere capriciousness.

THE LURE OF THE LIMELIGHT

There is another phase of growing girl life, however, that may be a source of distinct anxiety and solicitude to parents. That is represented by the definite supersuggestibility of growing young women and their tendency as a consequence of this to dramatize their thoughts and see them as realities. For instance it is said that somewhere in this country every week a young girl is found tied up in her home with a story that the tying up was done by burglars or someone intent on mischief, and investigation of the matter shows that the tying was done by herself and that the affair is merely an hysterical manifestation consequent upon that proneness which nervous young women sometimes exhibit of attracting attention, securing sympathy and above all putting themselves in the limelight.

Sometimes the dramatic deception which they stage is much more elaborate and calculated to deceive even those who should be expected to suspect the real condition. Fortunately as a rule their little deceptions are not serious. They will, however, rather readily feign illness and even get up a rather good imitation of some affection when they are homesick at school or tired of home life and desirous of having a change of some kind. This must not be taken too seriously, but above all must not be allowed to disturb parents' minds with the thought that there is necessarily anything seriously lacking in the character. Such incidents are quite compatible with good normal mental health when physical development has proceeded farther. In a word it is a question of disequilibrium between the physical and the mental during the period of stress through which young women pass in the early part of the second decade of life.

Unfortunately at times there may be rather serious consequences in such cases. It must not be forgotten that the lamentable witchcraft delusion in New England at the end of the seventeenth century which led to the putting to death of a score of persons, the imprisonment of several hundred and a state of mind among the religious people of certain parts of Massachusetts particularly that must have been extremely disturbing, was initiated by a group of girls from eight to eighteen who bore testimony to the experiences through which they were supposed to have passed as a consequence of the activity of witches around them, and who did not hesitate to give such evidence as led to the execution of certain of the witches and the imprisonment of many more.

The recently widely-circulated sensational reports of a ghost at work in a house at Antagonish, Nova Scotia, which proved on investigation to be nothing more than the

tricks of a young girl of this age, shows that human nature has not changed any in spite of the supposed progress of the race in the two hundred and fifty years that have intervened, and that such events must be carefully looked for in our time. There have been many striking incidents of this kind during the interval between the two dates that we have mentioned. The story of the Fox sisters, to whom the first supposed manifestations of modern spiritualism came, when considered in the light of their subsequent confessions, showed how children of the age of ten or even earlier may, by what seem merely childish tricks, lead to a much more widespread delusion than even that which took place at Salem in the witchcraft days. Above all it must be realized that any unusually strange or mystic story told by a girl at this age needs to be thoroughly investigated, and usually requires confirmation from some thoroughly reliable source before it is taken seriously. Negligence of this precaution has sometimes led to very unfortunate results.

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V

THE BOGY OF HEREDITY

"Qui genus jactat suum aliena laudat."

"He who boasts of his descent, praises the deeds of another.

SENECA—*Hercules Furens*—CCCXL.

* * * *

"Talent, lying in the understanding, is often inherited; genius, being the action of reason and imagination, rarely or never."

Table Talk; SAMUEL TAYLOR COLERIDGE.

THE BOGY OF HEREDITY

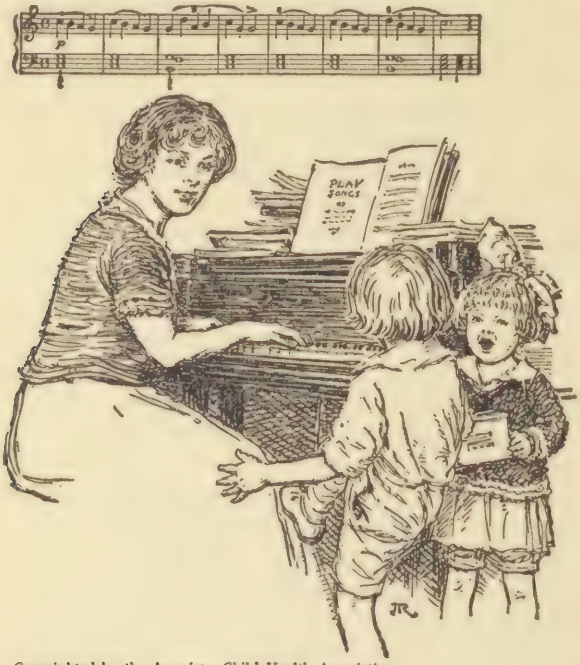
It will be remembered that when certain parents discuss in the hearing of their children the "badness" of other children, they virtuously explain such badness through the fact that the father or the mother of these children is usually none too good, and that as a result the unfortunates have "bad blood" in them. They indulge in these discussions in good faith, since in recent years, under the influence of that parti-scientific knowledge which tinges so much of modern thinking, parents have not only too often worried themselves, but unfortunately have at times set up worries and dreads in their children because of certain erroneous presumptions as to the inevitable effect of heredity on human beings. The amount of mental suffering that has accrued in some cases as a consequence of this is almost incalculable. Gloomy anticipations of unfortunate developments that were not at all justified by any definite scientific knowledge have been extremely common. For the sake of the children and the unfavorable suggestions which have so often resulted from these mistaken notions it seems worth while to set before parents and those who are raising children the more definite knowledge which has come to us as the result of the observations and experimental researches made in connection with Mendel's laws of heredity. These have revolutionized our knowledge of hereditary influences. Abbot Mendel's observations made in his monastery gardens on the plants have proved after the most rigorous investigation to apply to all living things. In the preoccupation of the last generation with Darwinism, Mendel's work was neglected. Good authori-

ties have not hesitated to declare that if his work had only come to the knowledge of scientists at the time when it was done over fifty years ago it would have changed the whole course of scientific thought and would surely have modified very seriously a great many of Darwin's ideas. It is from the time during which Mendel's work was unfortunately unknown that we inherit our popular notions of the present day as to heredity, and it is out of these popular notions, now known to be fallacious in so many respects, that what may be called the bogy of heredity has been formed.

MOSAICS OF ANCESTRAL TRAITS

The last twenty years have been especially fruitful in the accumulation of definite information with regard to heredity. Mendel's investigations made it clear that there is not a "lump" of mass heredity in living beings, either plants or animals, but that the traits of the parents are separated into distinct particles which are redistributed to the offspring so that the latter are "mosaics of ancestral traits." The nuclei of the germinal cells, in spite of their microscopic size, are divided into readily distinguishable portions which carry individual traits. These portions, called chromosomes, are transmitted from parent to offspring unchanged, but one-half of those supplied by each parent is lost in the combination with the half supplied by the other parent. Each human being is born with a definite number of chromosomes, usually considered to be forty-eight. Among the lost chromosomes may be those which represent bad traits, so that it is perfectly possible for a child to be better than either or both of its parents physically as well as in whatever depends on its physical constitution, though unfortunately on the other hand it is also possible for a child to be worse than its

parents. This is very well illustrated in the ordinary experience of life, and yet there has been a definite persuasion that children were bound to "take after" one or



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both parents rather closely and we were inclined to be surprised when they did not.

A NEW HEREDITARY DEAL FOR ALL

What recent advance in the knowledge of heredity has shown us very clearly is that no one can tell with any assurance beforehand just how far the offspring is likely to resemble or be dissimilar from its parents. We can be quite sure that their child will not be like either of them

completely, nor on the other hand represent in any way an exact combination of their qualities. How far their child may partake from either parent qualities beyond the more obvious physical resemblances, only time can determine. Each individual must be judged for himself, and he may reveal traits good or ill due to preceding generations that had been covered up or rendered recessive, to use the scientific term, in his immediate parents. It is inevitable no matter what precautions of reticence in the subject are taken, that the attitude of mind of those around him is always communicated to the child. To anticipate the worst then, as some are prone to do, and have this serve as a discouragement for the growing child is very unfortunate. The physical qualities may be quite different from those of the parents but so also may the intellectual and moral qualities. The recognition of this new deal which nature has provided for every human being is the most important acquisition to our knowledge as a consequence of the practical application of the important laws of heredity discovered by Mendel. Professor Conklin, head of the biological department of Princeton University, in his recent book, *The Direction of Human Evolution,* has emphasized this in a way that every parent should know.

"As each generation must start life anew from the germ cells, so in every person there is a new distribution of hereditary factors or genes. *Every person has a new hereditary deal, if not always a square one.* (Italics ours.)

"Owing to the fact that some traits, or rather their genes (that is the physical bases of traits) are dominant and others recessive, certain of the latter may be carried along for several generations in a latent condition, only to appear in some later offspring in which the dominant gene is not present. Feeble-mindedness, for example, is

a recessive character, and East has calculated that it is present in a recessive form in one person out of fourteen of the entire population of this country; but it does not actually appear unless two of these recessive genes come together in a fertilized egg. On the other hand, feeblemindedness and other recessive characters become latent when mated with normal and dominant characters."

THE ANCESTRY OF A GREAT GENIUS

It has often been pointed out, but cannot be emphasized too often, that some of our greatest human characters and finest intellects have come to us under conditions of family life that would seem to make it almost impossible that they should amount to anything in the world of their time. Sir Isaac Newton, for instance, the greatest of English mathematical geniuses, and one of the greatest scientific minds that humanity has ever possessed, was the son of a little farmer who occupied a freehold scarcely more than sufficient to support his family properly, and indeed they must have often suffered the pinch of hard times. His father had no initiative and no special abilities. His mother was a simple little woman with no education and an intelligence scarcely up to her station in life, but with an all-absorbing love for her son which enabled her to keep him alive during a very delicate infancy when practically everybody else had given up all hope of his survival. There was absolutely nothing in his heredity, so far as we have been able to trace it, that would give any hint of the genius that was to come. He seemed destined so far as heredity was concerned to be the most commonplace of persons instead of the greatest mathematical genius the world has ever known.

So far from Newton's career and the hereditary influences in it being an extreme exception, it is on the contrary

a type of what is very often noted with regard to great men. In the nineteenth century Johannes Müller, one of the greatest pioneers in the development of the modern sciences and one of the greatest teachers of the nineteenth century, was just the son of a poor struggling shoemaker of the Rhineland who had no special ability nor had ever exhibited any talent for anything higher than the shoemaking which enabled him to support his family. When his father died his mother proved to have a capacity for affairs hitherto unsuspected which enabled her to secure for her boy some higher education. In our own day Cardinal Mercier was the son of obscure parents of a mercantile class without any intellectual traits that would give promise of the distinguished character that was to arise from them. Both of these men had the advantage of an unusually favorable environment, inasmuch as they had the incentive that is likely to come into a growing boy's heart to do the best that is in him when he realizes that his mother has to struggle to secure advantages for him. A distinguished New York jurist once said, "The best education that I think can be given a boy is to put his widowed mother on his hands at the age of fourteen or fifteen to support. If there is anything in the boy it will surely be brought out under these conditions and education is, after all, the bringing out of what is in people."

LINCOLN'S HEREDITY UNPROMISING

More than occasionally we find that not only is the heredity of a great man negative, but that sometimes it is positively unpromising of any good, and yet we have some striking examples of children born under such conditions who have developed into some of the world's greatest men. A typical example of this is Lincoln, who now, more than ever, is looked upon as one of the greatest presidents,

if not absolutely the greatest, that the United States had the good fortune to possess during the nineteenth century. Lincoln's heredity would seem to have been almost hopeless. Lincoln's father was just a ne'er-do-well, constantly moving from place to place, always sure that the next thing that he would turn to must be successful, though without the persistence necessary for him to go on with what he was at and to push through to success here and now.

His son was to have a lofty persistence of character that enabled him to bear up under trials that discouraged the hardiest of hearts around him, and that helped him to lift up the sinking spirits of a whole people, and have them carry on through the long years of war in which any slacking would have meant the division of the United States into two parts, with all the unfortunate consequences that would surely have flowed from that. Anyone who takes down a history of that war and reflects on the fact that from July, 1862, to the end of June, 1863, the North did not win a decisive engagement, and the South seemed inevitably to be about to achieve success, will realize what this phase of Lincoln's character meant for our country and our people. It is extremely difficult, however, to find anything in Lincoln's immediate heredity, or for that matter among his forbears for generations, that would have given any inkling of his character and his genius. And yet he owed so little to his environment that it would seem that all his qualities must have come by inheritance, for he had almost no education, only a few months of schooling, and such mental development as he was able to obtain for himself by reading half a dozen great books before he was twenty. In spite of all these handicaps he developed into one of the greatest of statesmen, one of

the most thoughtful of writers, and one of the most wonderful of men.

It might possibly be thought that under the circumstances Lincoln's qualities were an inheritance from his mother, for it has often happened that crossed heredity from mother to son seems to be the explanation of the origin of the qualities of great men. Lincoln was no more fortunate in his mother, however, than he was in his father. Much has been written in aspersion and defense of poor Nancy Hanks, and while she was better doubtless than some of her historians would allow, there is no assurance in anyone's mind that she represented a fount of good qualities from which could possibly have come the greatness of her son, Abraham Lincoln. If anything it would almost have been anticipated that the unfortunate paternal heredity would be emphasized by whatever maternal inheritance may have come to her great son. Here is probably the most striking example of non-heredity that we have.

THE MYTH OF THE MINISTER'S SON

There are many others, however, that might easily be quoted, some of them, of course, in contrary direction. There is a tradition in this country that the sons of ministers in city churches do not turn out well, though on the other hand there are many striking examples that the sons of the ministers of country churches, whose families have often had to go through rather hard things in their years and struggle along as best they could, have given us some of our greatest men. Usually it is considered that the city ministers have received their calls to important churches because of greater cleverness and talent and intellectual qualities of many kinds. Manifestly here is a

question where the comparative influences of environment and heredity are very well illustrated.

The family of Sir Thomas More in England is a rather striking example of non-heredity, for old Sir John More, the City Magistrate, was at best only a genial dispenser of justice in unimportant cases. His son, Sir Thomas, was one of the greatest minds that England has ever had, and the only Lord Chancellor that ever cleared the docket of the court of Chancery—a magnificent example of a man of great intellectual power, profound character and great ability in many lines. The Chancellor's son, however, was only a commonplace young man with nothing like his father's intellectual qualities, though of course crossed heredity may have played a rôle, for Erasmus thought Margaret More one of the ablest scholars of the great Renaissance period.

MATERNAL HEREDITY OF GREATEST IMPORTANCE

Recent investigations in cytology, that is, the biology of the cell, have made it very clear that an old idea in popular belief, which for several generations has been rejected supposedly on scientific grounds, is now once more considered to be of scientific significance. That is that the mother counts for more in the offspring than the father, and that certain great basic qualities are due to germ cell influence and not to the sperm cell. At a recent meeting of the International Congress of Eugenics, Professor Conklin of Princeton dwelt on the fact that phyletic inheritance, that is, the hereditary impulse which rules the genesis of the discrimination of living things into phyls or great families, comes from the mother, while a single animal germ when fertilized may develop into a vertebrate or invertebrate animal, the impulse

which will determine that development comes not from the nucleus (the chromosomes of which determine the individual traits), but from the body of the cell of the germ, and the body of the cell is always *maternal* in origin.

This reversion of scientific opinion undoubtedly means that the maternal influence contributes much more than has been thought to the individuals within the species as well as in the determination of the species, and very probably basic qualities of character in the individual human being owe more to the mother than to the father. It has often been said that we have in human nature spineless creatures and those with backbone—vertebrates and invertebrates. The expression is, of course, only figurative, but the figure is extremely significant. It may prove that these qualities of either backbone or spinelessness may be oftener an inheritance from the mother than from the paternal side of the house. Certainly in the history of the race it would seem as though good mothers have counted for ever so much more in the makeup of great good men than their fathers, and that over again their contribution to the new being has proved capable of neutralizing unfortunate qualities that might have come from the father.

This new scientific development only serves to show that there is a tendency in present-day science to do away with even more of the bogy of heredity than even had been the case before. The cell body, which for so long was considered to be the all-important part of the single cell which represents the beginning of a new being, was entirely neglected for the consideration of the nucleus, and now is undoubtedly coming back into its own, and will probably prove to mean at least as much as, if not

more than, the nucleus; and yet it is almost entirely, if not absolutely, a product of the maternal factor in inheritance.

FAMILY TREES AND FAMILY SKELETONS

We heard much of the Jukes family and the Killikats and others, and how much heredity means in making people criminals and ne'er-do-wells that we have been inclined to think men are the representatives at best of their inheritance, the victims of heredity as it were. It was very much like the old-fashioned doctrine of predestination. But now we have come to realize that opportunity, and the individual himself, and his will power, may enable him within limits to break and change the results of heredity and start afresh to the great advantage of himself as well as of all those with whom he is brought in contact.

The family of Jonathan Edwards is often cited as an example of the opposite influence to that exerted in the Jukes and Killikat instances. While these families, originating in two defectives, have supplied a large number of descendants who had to be cared for by the state, either in poor-houses, insane asylums, or jails, the Jonathan Edwards descendants, contrariwise, were in the great majority thoroughly representative citizens, occupying positions of trust and authority in the state. The contrast proved very striking until someone looked beyond Jonathan Edwards himself and found that in the immediately preceding generations to that of the distinguished President of Princeton the family was not very exemplary or indeed of the kind that might with any assurance have been expected to have very respectable descendants. One of the female members, I believe, among the immediate

ascendants, and more than one of the male ancestors, were no better than they ought to have been, and even considerably less exemplary than the average of mankind. It is rather a surprise to find the distinguished Jonathan Edwards issuing from such stock. The surprise, however, would mainly be for those who place too much reliance on family inheritance as a very potent factor in influencing the conduct of descendants. There is a story told of the great English lexicographer, Dr. Samuel Johnson, that he once ventured to propose marriage to a young woman who refused him on the grounds that she had an uncle who was hanged (such an event was much commoner in the eighteenth century, when there were over a hundred felonies punishable by hanging, according to the English law); but Doctor Johnson refused to consider this as a serious objection and he said in rejoinder: "Well, I had two uncles who deserved to be hanged," and I suppose that a good many people might possibly feel that they were justified in re-echoing Doctor Johnson's expression. There are not many families that have not one or more black sheep, and the surprise often is to find that of two brothers or two sisters with exactly the same parental inheritance, and of course exactly the same ancestors for all the generations back to the beginning, one will be a saint and the other a sinner. Indeed, such is human nature.

MENTAL DIFFERENCES IN TWINS

Probably the best evidence to dispel the bogy of the inevitable influence of heredity is to have studied a series of the lives of twins, and especially those twins who resemble each other so closely that only those who know them very well can tell them apart. I have the accounts

from personal observation of about a score of these. One-third of them were rather similar in character, in three cases entering the same religious orders and living for many years lives so similar as to be very striking. To counterbalance these there are half a dozen pairs of very similar twins who are quite unlike in their dispositions and characters. In one case one of them is the president of the town bank and the other is almost the town's ne'er-do-well. One of these pairs of twins was a confirmed inebriate, though his brother never seems to have had the slightest taste or craving for liquor. One of them is a stock-broker and the other is a minister of the gospel. So far as the physical appearance goes it would be expected, according to all the ordinarily accepted principles of heredity, that such persons would always be very much alike; but they very often prove to be quite different. Nothing could serve us better to make it evident that little dependence can be placed on general principles of heredity for the determination of character, and nothing illustrates more clearly how easy it would be to plant unfortunate suggestions in the minds of children from dependence on such principles.

NEWER FACTS CONCERNING INSANITY

More careful collection of statistics have rather seriously disturbed ordinary impressions with regard to hereditary influences in families when insanity is known to be present in a strain. At the Glasgow meeting of the British Medical Association there was a discussion as to the influence of heredity, to which the statistics of a series of forty-four families carefully collated by Lange of Denmark was presented. Seventy members of these families had been confined to the asylum. Four hun-

dred of them showed mental symptoms varying from excessive nervousness to definite insanity. But on the other hand these forty-four families produced two cabinet ministers, one ambassador, three bishops, eight prominent clergymen, three generals and a number of other high military and naval officers, three members of the High Court of Justice, nine university professors, two head masters, two directors of public institutions, eight hospital physicians, twenty-three men who secured their doctorates at the university, besides a number of eminent successful business men, members of Parliament, teachers, government and municipal officials and others of a very distinct value to the community. It would seem as though, according to ordinary impressions, the best thing for the world would be for these families to stop producing offspring so as to avoid bringing the insane into the world; and yet in that case the country would have been deprived of a large number of extremely useful citizens above the average of mankind.

A very interesting contrary reflection on the persuasion of even most physicians that the insanity taint in families is sure to go on and increase in time, has come as a result of certain studies made by the French in the West Indies, where there is rather close intermarriage and not a little mental disturbance. They found that in succeeding generations the insanity taint had a definite tendency to disappear. There were for instance only half as many insane descendants in the third generation, though that was much more numerous than the second, where the psychopathic taint had been most prominent. Even where cousins intermarried the offspring of these consanguineous marriages were not infrequently all normal, in spite of the hereditary taint. All this is such a

contradiction of ordinary impressions, according to which there has been question whether the insane might not be justifiably sterilized, that it is well to know it. Exact, scientific knowledge such as this will help to lay the bogy of heredity, which often makes parents over-solicitous and sometimes is transferred from them to the growing children or young folks.

HOLDING THE BOGY UP TO VIEW

What we need, above all, to be sure about is that this bogy of heredity is not allowed to become an active unfavorable suggestion in young folks' minds, as to the handicap under which they are placed, because such dreads will inevitably discourage them and keep them from doing the best that they can. A man of forty-five who had lost half a dozen positions of responsibility and good compensation before he was thirty-five, because he indulged in liquor to excess, once told me that he thought the principal factor in causing him to take to drink was the fact that, his father having been an inebriate who ruined his life, everyone at home constantly expressed the fear that he should follow his father. The week before he went to college the family clergyman made it a point to talk to him on that subject; the Sunday before, his uncle took him aside and talked to him; two aunts dropped hints of it; and then the night before he left for school his mother wept over him and made him feel that she could scarcely persuade herself but that he would follow in his father's footsteps and warned him against the danger. He had never tasted liquor, and so far as he knew he had not the slightest hankering for it. He found no difficulty at all in keeping away from it at college for the first year, but in the second year he was tempted to try a

drink just because he had heard so much about it. He did not particularly care for it and this gave him confidence that he could surely resist any temptation in the matter. He got into the habit of taking it whenever others did. The very fact that so much had been said to him about it, made him feel, as it were, that he would display his manhood and realize for himself that he was not tied to his mother's apron strings, by drinking when the fellows did.

He actually came to have a liking for liquor after a while, and after his college days frequently was seen drunk and, as I have said, lost position after position, broke his mother's heart, and then when he was thirty-five came to realize that he had no unconquerable hankering after liquor, but that he had only formed a habit with regard to it, not at all because of any natural craving, but because of the tendency of human nature to react against suggestions that seem to deprive us of our individuality or our right to think or act for ourselves. He realized that he was just hurting himself through an unfortunate contrary suggestion, so he resolved to break off and did so, and when I saw him he had lived for nearly ten years without ever touching a drop of liquor. He found it quite easy to refuse to take liquor, even in the days when it was readily available. This question of the influence of the very natural reaction against suggestion in many people should always be kept in mind. Warnings often repeated may only prove, by revulsion of feeling, suggestions in an exactly opposite direction.

THE IMPORTANCE OF GOOD ENVIRONMENT

While we have raised up for ourselves a very spectre of heredity, a veritable Brocken phantom, the creation in our own imaginations, of the unfavorable influence in life

of hereditary tendencies—a spectre which must be exorcised to the extent at least of not letting suggestions from it reach nervous children—it must not be forgotten that there is a very definite, though much less far-reaching, influence of heredity. Insanity is distinctly inherited, and so are certain of the nervous diseases that are founded on an organic basis, even though they may be largely psychoneurotic in character. Acquired nervous diseases, due to improper regulation of life, lack of exercise, insufficient eating, undue yielding to bad habits of one kind or another, are not transmitted to succeeding generations. Acquired characters of any kind are not inherited, though for many generations before our time men thought they were. If a father has been a drunkard or a thief there is no absolute reason in that fact why any of his progeny should inevitably go the same way because of hereditary influences, though there is often much in their environment that may tempt them, and often much in suggestion that may weaken their wills and make it hard for them to resist temptation. Environment, however, is ever so much more important in the matter than heredity.

The fact is that our present-day generation knows entirely too much about heredity, or rather thinks that it does, for its own good. It knows entirely too much on the subject that is not so. "Nothing makes mankind so ridiculous," Josh Billings, writing as Uncle Esek in the *Century* once said, "as the knowing so many things that ain't so." It is extremely important not to set up in young folks' minds a series of suggestions and dreads and inhibitions founded on theories that have not been substantiated by present-day scientific experience. It is extremely important that parents should give the rising generation a chance to work out its character and individuality for itself, without permitting the bogy of heredity to inter-

fere rather seriously, as it sometimes has, with that development in its normal course. Nature has made provision so that no two human beings are ever alike physically no matter how much they may resemble each other. We have every reason to think that the same thing is true as regards the moral and intellectual side of man. Everyone should have the chance to work out that individuality for himself.

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VI

VITAL FOODS AND THE NERVOUS SYSTEM

"My lord, Mr. Shelton would have my Lady Elizabeth to dine and sup every day at the board of the estate. Alas! my lord, it is not meet for a child of her age to keep such rule yet. I promise you, my lord, I dare not take upon me to keep her Grace in health an' she keep that rule. For there she shall see divers meats and fruits, and wine, which it would be hard for me to restrain her Grace from."

Extract from a letter written in 1536 by the Governess of Queen Elizabeth to Lord Cromwell when the Princess was about three years old.

VITAL FOODS AND THE NERVOUS SYSTEM

When people began to live more and more in cities instead of in country places such as villages and farms they became engaged in various occupations which kept them indoors most of the time, and they were generally obliged to live in more crowded quarters and to come more and more in close contact with other people. All this was of course different from life in the country districts, but it did not constitute the greatest or most marked change in their manner of living. Changing their surroundings was a secondary consideration in comparison with the change necessitated in the kind of foods which they ate every day.

FOODS THAT TRAVEL

Foods in the large city are brought long distances from the places where they are produced, and so the growth of these communities has made it necessary to invent many ways of preserving foods so that they will occupy less space and keep without spoiling for long periods of time. Time-saving food devices, too, have come in, such as the prepared breakfast foods and the like which do not even require cooking, the concentrated soups, which only need to be diluted, the canned vegetables and fruits and other foods which only need to be heated to make them ready for use. Not that people in country districts do not use these prepared foods nowadays, for they do; advertising has placed them in every crossroads store—but a generation or two ago the rural population lived on foods quite different from the city dwellers or even those who live in the small towns nowadays.

If people could have kept on living naturally, spending much time in the open and eating fresh, unchanged foods, it is quite probable that many nervous disorders which have been on the increase in modern times, would not have made their appearance. "The strain of modern life" is a phrase much used nowadays to account for nervous disorders in both the young and the old, but it is no exaggeration to say that part of this strain is due to the manipulated and manufactured types of food which we of the present generation are obliged to eat.

A DISEASE OF THE SPANISH MAIN

Most persons know that improper diet can and frequently does cause diseases of nutrition. Scurvy, which affected sailors and Arctic explorers in times past when they lived for a long time without fresh foods, is a disease in which early symptoms are bleeding of the gums and pains along the bones near the joints. In the old sea stories of privateering and piracy on the Spanish main we read a great deal about this disease, and how it appeared among the men of the crew when ships were becalmed or lost their course and were delayed at sea. It was known that fresh acid fruit juices like lime-juice would prevent or cure scurvy, and so most ships carried lime-juice in those days as a food ration. British trading ships were on this account for a long time called "lime-juicers."

Another disease, one which especially affects the nervous system, is beri-beri, and this disorder is found among people such as the Japanese, who eat a great deal of polished or coated rice to the exclusion of other foods. Still another disorder which has symptoms not only of degeneration in the nerves, but also in the brain itself, is pellagra, an ailment which is suspected of being in some way

dependent on a diet in which cornmeal is the predominating food. Pellagra is prevalent in Italy and in our southern states. It will be noted that these diseases are all due as much to the exclusion of certain foods from the diet as to the nature of the food that is eaten, and so they are called "deficiency diseases."

THE FUEL OF THE BODY

We know very well that the muscles and the glands of our bodies need certain kinds of food fuel to make them work properly, and that this fuel may be lacking in an improper diet. We know, for example, that the working man who uses his muscles a great deal needs more fat meat and bread and potatoes than the clerk—and we must realize that in the same way our nerves and our brains need a certain kind of material in our food to keep them in good working order and prevent them from wasting and degenerating. This was not realized until recent years, because we did not know so much about the brain and nervous system as we would like to, and we have been entirely too complacent about our knowledge concerning foods in general. The discovery of germs as a cause of disease and the working out of caloric values in food substances perhaps had something to do with certain popular points of view which have produced changes in our diet.

REFINING THE LIFE OUT OF FOODS

With our knowledge of how germ diseases could be borne by food it was natural that we should look with favor upon foods which had been sterilized. Also we liked to have our foods, such as bread, suggest cleanliness and be white and dazzling like the porcelain-walled "dairy lunches." So we demanded white flour and white rice

and white bread, little realizing that what we gained in æsthetic values we are losing in other ways. Then one day a new word came into the language which now nearly everyone knows—the word *vitamines*. What vitamines really are chemically nobody actually knows. Many fresh foods are rich in these mysterious substances, and there are several kinds of vitamines. One group is found mainly in milk, suet and animal fats excepting lard, another found in green vegetables and fruits, and a third is contained in the husk of grains and kernel of foods such as beans and peas. From studying their action in the body we know that some of these substances which are found in clean raw milk, or to a less degree in milk heated but a short time and powdered milk, and also in green things like spinach or fresh young carrot in which the cooking water has not been drained away, will promote growth of body tissues, and that cats and puppies deprived of these substances do not grow properly or develop in a normal manner.

THE MYSTERIOUS VITAMINES

Eating certain cooked things exclusively may cause scurvy. Milk boiled one or two minutes is less liable to produce this disease than pasteurized milk, which is heated at a lower temperature for a longer time. Orange, limes, lemon, orange-peelings, tomato, raw cabbage, raw potato, clean raw milk—all these things added to the diet will keep scurvy from appearing, and a diet made up largely of either boiled or pasteurized milk without the addition of these other foods should not be allowed. Boiling or heating milk for a longer or shorter period has a tendency to destroy the substances—one of the three vitamines—which milk contains and which prevent scurvy.

But of greater importance to the especial nutrition of

the nervous system are the so-called anti-neuritic vitamines—the things which long omitted from the diet result in diseases of the nervous system such as beri-beri. These substances are found in the husk of grains—in the brains, liver and other cellular organs of animals used as foods, as well as in yeast, and they are abundant in whole wheat and oatmeal and unpolished rice. The use of such foods with other foods such as good fresh milk and eggs and greens will prevent the occurrence of beri-beri and pellagra.

EATING THE "PECK OF DIRT"

Clean raw milk from well-fed cattle will be found to contain all of these vitamines; other substances such as orange juice will contain only one of them in sufficient quantity. It will be perfectly obvious, then, that there is justification for the old saying that a man has to eat a "peck of dirt" in his lifetime—if by dirt we mean the things we formerly threw away or regarded as unclean or not fit to be used unless cooked to sterilization. Bearing all this in mind, it is reasonable to assume that when the entire or almost entire absence of these substances in a diet results in such serious disease in the nervous system of men and animals as to cause pain and even paralysis, that even a relative lack of the foods which contain them must of necessity have a great influence in producing irritability and instability of the nervous system of growing children.

FOOD IN NERVOUS DISORDERS

That is why diet is really important in the correction of nervous disorders in children. The late Dr. Weir Mitchell, who knew many things not written in textbooks, was equally famous as a novelist and as a physi-

cian. Few people have not heard of the "Weir Mitchell rest cure." This wise neurologist realized that although all nervous people are not under weight, many underweight people are nervous. He placed such individuals in bed to save their energy, fed them frequently on food easy to digest, and as their pounds increased their nervous symptoms disappeared. We see the application of this principle of more food and less exercise being utilized today in the treatment of children of school age by private and school physicians. It is realized that children who are under weight because of lack of proper food or too much work or play are liable to develop serious nervous and physical handicaps. In some of our public schools so-called nutrition classes are held where children are weighed and measured and compared with the normal scale for children of equal age or height. Children who are ten per cent. below the normal weight for their height are placed in a special class and given a special physical examination and also given special diet. It is found that rest is necessary in some cases, and rest rooms are also found in some of these schools where students are obliged to take the prescribed treatment of lying down and resting for certain designated periods during the day. It has been found that while some of these under-weight students were hard workers and some few even led their classes, yet as a rule their poor physical condition usually prevailed in the end to retard their progress, not infrequently by frequent absences or in some cases by complete physical and nervous breakdown. The place of diet and rest in helping the mental progress of growing children has therefore passed the experimental stage. It is a fact now well established that improper nourishment and fatigue retard the school child's mental progress. It is

unfortunate that private schools have not realized this truth to the same degree as the public schools have done.

A BROAD QUESTION

It will be asked perhaps, "What food should a young child have?" This question is too broad a one to be answered by any article of this kind or of any other kind. Individual advice such as this should be given by a competent physician, specializing in diet for children, or by a competent nutrition worker. Individuals vary in their food requirements even when very young. There are, however, certain fundamental principles of dietetics which apply to all children. Milk is a universal food. It should not be abandoned, as frequently happens, when the child ceases to nurse or drink from a bottle. Human milk is the best milk for human infants, and more and more we are coming to agree with the old sixteenth century poet who wrote:

> "A sage declared, and with his words I'm pleased,
> No mother should from nursing be released."

Until a child is at least five years old milk should be a very important element in his dietary.

THE INVALUABLE GREENS

As to green vegetables, these, too, should be given, and in a way that preserves their vital principles. Spinach, string beans, etc., should be cooked in very little water, so that none is drained away. Certain raw things such as shredded lettuce or even *very* finely chopped raw cabbage should be given in *small* quantity after a child has gotten all his teeth—that is, not earlier than after the second year. This may seem like heresy, but raw cab-

bage is rich in water-soluble vitamines, and, if not too old, is not indigestible when taken in a small quantity.

Children have an instinct to gnaw raw turnips and cabbage and the like, just as dogs and cats vary their carnivorous diet by eating grass. The green vegetables, the raw fruit juices, the whole-grained cereals such as whole wheat and oatmeal, milk and eggs and whole wheat bread—these are the basis of a safe and sane diet, rich in calories as well as vitamines, which may be varied to suit the needs of any individual.

FOODS CONTAINING PHOSPHORUS AND LIME

The mineral salts such as phosphorus and iron are found abundantly in any such well-balanced diet, and it is well to remember that these mineral foods are important for the well-being of the growing child—Professor Sherman, of Columbia University, has produced in animals a modified form of rickets by depriving them of milk, cottage cheese and similar milk products which are not only rich in lime, but also in the amount of phosphates they contain. As phosphorus is found in nerve tissue as well as in bones, the phosphorus-containing foods assume a very great importance in the growth of the nervous system, as well as in the building up of the bones of the growing child.

THE CHILD WHO WILL NOT EAT

A problem often brought to the physician by a mother is "How can I make my child eat?" Frequently when a diet list is given the mother will say, "My baby will not drink milk and refuses to eat green vegetables. What shall I do?" This is indeed a difficult problem to solve. First we should investigate the probable cause of the dislike toward these foods. And we must remember that

such causes are hard to understand by grown-ups. Children are imitative and fond of power over their elders. If they hear their parents discussing food likes and dislikes they will soon begin to imitate them. Before long they also discover what they believe is an important fact, and that is that no one can force them to swallow food

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against their will. If in addition they come to realize that a refusal to eat a certain food causes a considerable amount of excitement in their family and focuses attention on themselves, they do not fail to frequently utilize this means of asserting themselves. If, finally, at times a scene is created and a rejected foodstuff is forced upon them, then an unpleasant negative mental association is apt to develop at the sight of that particular article for a long time afterward, which may continue into adult life. Most of the likes and dislikes we encounter in adult life were acquired in childhood. "I never could drink milk," and similar statements have nearly always at their source a mental antipathy dating back many years, and most of

these individuals are really suffering from a negativism acquired when they were children.

It is most important to prevent when possible in the beginning the formation of these habits of food dislike in the very young. To that end parents should never permit a discussion of food likes and dislikes in the hearing of children over six months old. If a food is brought to a young child reared in this way, say when a year old, and he for the first time pushes it away, the attendant should exhibit no concern, and remove it without comment. The expressions, "it's nice" or "it's good for you" should not be used. The child should not be coaxed. Another necessary precaution is not to add highly-flavored foods or sweetening to the diet. Such things as bacon or graham crackers are especially striking examples of what ought not to be given. The reason for this is that the proper and necessary diet for the child in his earlier years is more or less tasteless, and once he acquires knowledge of complex flavors, the baby is certain to demand a strong flavor to all of his foods. So it is that these "spoiled" children will nearly always eat meat and bacon and sweet things and refuse cooked cereals and green vegetables and bread. Giving the baby "tastes of things" is laying the seeds for future food dislikes in the infant. The practice of feeding sweets between meals and especially before meals is a very common origin of food dislikes and lack of appetite in the child before or during the school age.

When a child has once begun these bad habits and has as a result been malnourished, it is a difficult matter to bring him back to a proper state of nutrition. The robust child who refuses certain foods could be treated by removal of the disliked article and the ignoring of his action, bringing the food to him again in a day or two,

and making him keep it in front of him until it is eaten; but in very thin children this might prove a handicap to the child's nutrition. Refusal to give the food which the child most desires, such as meat or sweet desserts, until some of the disliked though necessary food is eaten may help in some cases. A conspiracy of parents to suggest each day that the child is eating more and more, and even the pretended removal of a plate of food lest he eat too much, may serve sometimes to reverse the child's negative impulses by taking away the idea that he is being compelled to eat. Weekly weighing and a reward for a gain in weight may also prove useful. Nearly always a rest hour in the afternoon, the child lying down and not reading, should result in a gain of weight and make easier later progress in uprooting food dislikes. Of course it is understood that obstacles in gaining weight, such as infected tonsils or enlarged adenoids, or decayed teeth, should be attended to so that the child may be made "free to gain."

THE BEHAVIOR CLINIC

Behavior clinics for children have been instituted in various cities within the past year—notably in Boston and in Minneapolis. At Minneapolis a typed slip is given to the mother whose child has acquired food dislikes and a student-worker follows up the child at home to see that the proper routine is followed. The Minneapolis rules are as follows:

METHODS OF ACCOMPLISHING THE FEEDING OF CHILDREN *

1. *Guidance.* Help the child to get acquainted with new food and to accept flavors. Give only a small amount of a new food the first time, gradually increase

* From the University of Minnesota Division of Home Economics, Nutrition Section, and Minneapolis Infant Welfare Society.

the amount given. Introduce one new food at a time. Sometimes drinking milk through a straw helps the child to learn to like milk. Letting him pour it from a little pitcher may also help. Serving milk in an attractive cup also often helps to overcome the dislike for it.

2. *Example.* If older members of the family are enthusiastic about foods that are good for a child, the child will generally imitate them. They should learn to eat everything, thereby setting a good example.

3. *Praise.* Praise the child when he eats well. Be proud of him and let him know it.

4. *Rivalry.* Where there is more than one child in the family competition helps them to eat the food they should. The spirit of rivalry is good.

5. *Patience and Firmness.* Show the child that you expect him to eat his food. Set it before him and make him sit there until he eats it, no matter how long it takes.

Start with a small amount of the suitable foods and give him as much time as necessary to eat all the food set before him. He will soon learn that it does not pay not to eat everything. The next time give him the amount of food he really needs.

6. *Deprivation.* Deprive a child of dessert or some food which he likes very much if he does not eat the rest of the meal. *Be firm but not cross.* If you decide to do this do not change your mind (children soon discover that it is possible to make you change your mind).

7. *Force.* Force is necessary for vomiting children (those who can vomit at will). Give such a child a small amount of food, if he vomits, give him more, continue until he keeps the food down. When he learns that you know his trick he will stop it and eat without vomiting.

8. *Education.* Show pictures and tell stories of children who eat well.

9. Coöperation of parents and older members of family is most necessary. There should be no divided authority. Father, mother and older members of the family should agree on a method of discipline or the child will size up the situation and choose what he wishes to do. Many families get together only at mealtime and this should therefore be a happy time.

Finally, When you consent, consent gladly.
When you refuse, refuse finally.
When you punish, punish good-naturedly.
Commend often.
Scold never.

It will be frequently found that as the child approaches his proper average of nutrition, nervous habits will gradually fade away and food dislikes disappear, to be replaced by real hunger. It is unfair to blame the children themselves for these food dislikes. They are usually developed and fostered in the young by unwise parents. Only and lonely children, or overpetted children in small families, are most liable to develop them. The responsibility of the father and mother in training their children in self-control and simplicity of diet is one which cannot be left to attendants, however skilled; its evasion, or even the deliberate feeding by parents of unsuitable foods, are frequent causes of worry to these parents, and misery to the children in later life.

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VII

NURSING AND THE NURSE

"When a child is removed from its mother and given to a stranger the energy of fondness for the maternal parent is checked little by little, and all the vehemence of its impatient solicitude is put to silence."

Noctes Atticæ, Aulus Gellius, Lib. XII, capt. circa 160 A. D.

* * * *

"To seek a nurse ye trace the country round,
At length the mercenary aid is found. . . . . ."

"O past all human tolerance the curse,
The endless torments of a hireling nurse!
If to your children no regard were due,
For your own peace avoid the harpy crew;
A race rapacious, who with ceaseless strife
Disturb the stream of calm domestic life."

La Balia (*The Nurse*), circa, 1540.
Translated by Tytler, 1767.

NURSING AND THE NURSE

A gallant gentleman named Luigo Tansillo, who was both a soldier and a poet and lived in Italy, wrote a long poem about four hundred years ago, which he called "The Nurse." It was in reality a book of rhymed instruction to mothers, urging them not only to supply food but also to care for their own children. In every period of the world's history there seem to have been wise people who realized the great influence which the nurse may exert, not only in developing the bodies, but also in forming habits of speech and even of thought in the growing child. Tansillo did not think kindly of the nurse of his day, though he wrote particularly of the wet nurse; in one part of his poem he seemed to grow almost exasperated with the nursing situation, and said:

> "O past all human tolerance the curse,
> The endless torments of a hireling nurse!
> If to your children no regard were due,
> For your own peace avoid the harpy crew;
> A race rapacious, who with ceaseless strife
> Disturb the stream of calm domestic life."

It may be a little comfort to the modern mother who has trouble in finding a nurse reliable enough and intelligent enough and moral enough to be entrusted with a large part of the care of a much-prized baby, to realize that the difficulty of obtaining such a paragon and the annoyance of having an unsuitable person in such a capacity is an age-old problem and an age-old worry. Mothers in ancient Egypt and Greece and Rome, even long before Tansillo's day, were distressed about it. Back in the second century Soranus of Ephesus told what to choose and what to avoid in a nurse. "The essential

qualities of a good nurse," he said, "are patience, sympathy, neatness and industry." Matrons of the twentieth century may well ponder on the old Roman physician's formula, for I doubt if anyone can improve on it! All of which proves that some of the problems of living have not changed much—and have not improved much—with the passing of the centuries.

The reason why the hired nurse is frequently not satisfactory is because it requires either unusual intelligence or a vicarious maternal instinct very well developed in connection with at least ordinary intelligence to become a good infant's nurse. It may be argued that the old-time foster-mother of Europe or the colored "Mammy" of our own South obtained splendid practical results, and yet that these nurses were not usually very intelligent and possibly not very maternal. This apparent contradiction is easily explainable. The foster-mother and frequently the "Mammy" were actually wet nurses; they not only cared for but also fed the infant from their breasts. Careful studies made in St. Louis recently among many groups of breast- and bottle-fed infants covering a period of ten years caused Dr. Adrien Bleyer to draw an obvious conclusion which is almost startling. Doctor Bleyer wrote:

"The growth in weight of young infants may vary but little from normal standards in the face of many unsatisfactory factors, such as over-crowding, poor ventilation, over-clothing, uncleanliness and so forth, provided an adequate supply of breast milk is available. This is therefore the factor upon which the efficiency of home care most largely depends." (*Mother and Child,* vol. ii, No. 11, p. 500.)

We can readily see in the light of these studies, that the reason why the foster-mother and the "Mammy"

made good was because the natural food these probably ignorant women furnished atoned for all their errors of hygienic judgment.

THE NERVOUS MOTHER

In selecting a nurse for the baby, the mother may feel satisfied that during the first year maternal nursing if adequate will make worries concerning the exact type of nurse employed more a question of the mother's comfort than of the child's nutrition. When the child is fed artificially the problem becomes much more complicated. But it must not be assumed that this rule is invariable. It is true in a majority of instances; there are, of course, exceptions to it. It is more than likely that most of these exceptions are found in the case of the nervous mother with a correspondingly nervous infant. The breast-fed colicky baby who cries continuously, sleeps little, has abnormal stools and gains weight erratically may well be a notable exception. There are such infants, and the condition described often occurs in the first weeks of the infant's life. It forms a vicious circle, the nervousness of the mother causing an abnormal milk secretion which does not "suit" the baby's digestion; the irritable nervous system of the baby augmented by an unbalanced ration causing an almost unbelievable persistence in crying which is always nerve-racking to the mother, and frequently so to the father. In situations such as this the services of a trained nurse experienced in the care of infants, joined to and supplementing the guidance of a competent physician, will often serve to break the vicious circle by relieving the mental anxiety of the mother and giving the infant the benefit of experienced medical and nursing care. Often by proper treatment of this sort a mother previously convinced that she would be unable

to continue nursing her infant at home finds within a short time an entire change in the condition of both herself and her baby. This situation often comes about when a young and inexperienced mother has returned from the hospital after having had her first infant. In the hospital all personal responsibility was taken from her shoulders by others, and now she finds herself a convalescent, with an entirely new set of duties to perform in addition to her household routine. The mental reaction for a time may prove a trial to both herself and to the baby. It is in such situations as this that the resident trained nurse, or even the visiting nurse, may be of great service in establishing the morale and training the young woman in the art of being a practical mother.

CHOOSING A NURSE

The type of trained nurse for this work should not be representative of operating-room efficiency, but rather one able to teach and to sympathize with a nervous mother and to be patient with a crying baby. It is psychotherapy and instruction that this mother requires as well as actual nursing care. It is not always easy to fill these personal nursing specifications, but to the credit of the nursing profession let it be said that today this type is not at all infrequent among graduates of children's and maternity hospitals.

Trained nurses are frequently a necessity; but excepting in illness, or as assistants in health teaching, they may also be classed as luxuries, if by luxuries we mean things or services that are a comfort to use but not absolutely necessary. The well baby can easily get along without a trained nurse. And the term trained nurse or even registered nurse, does not of itself imply that the nurse has any special knowledge of caring for an infant. Many

nurses pass through training with little practical experience in this line, especially if they are graduates of a general or a surgical hospital; while on the other hand, a nurse who has finished in a maternity or children's hospital has had unusual training in this field. Of course being a good nurse for an infant is not only a profession but also "a state of mind." Few trained nurses care to nurse well infants, and relatively few people nowadays can afford the luxury of the trained nurse's services for this duty.

In recent years it has been the custom for foundling and other institutions where children are received, to institute elementary courses in the nursing care of infants, for the training of young women who work in these institutions while being so educated. A very well-known little book which is still a "best seller" and is literally a catechism of infant care, was designed originally as a text-book for a nursery-maid training school. The result of this innovation was to supply a limited number of young women with a good practical and theoretical knowledge of the elements of infant care. The supply, however, has not been equal to the demand, and now, in Boston, an experiment is being tried of giving training by talks and demonstrations at the infant welfare centres on two or more nights a week to classes made up of young women who are doing nursery-maid work in private families. This scheme of education may be followed in any community where there are infant-welfare stations, and has been an unqualified success in Boston.

THE NURSE-MAID PROBLEM

The question for the mother to decide is how much care she is personally to give her baby. If she fulfills her maternal duty, she cannot fail to be with the infant

at frequent intervals during the day, whether or not she employs a nurse.

If the nurse is not one especially trained in baby care the mother must out of her limited knowledge give instruction, unless she arranges to place the maid as an assistant in some child-welfare centre for a couple of hours a week. There the untrained nursery-maid may learn at least the rudiments of infant care. But no matter what the technical training of the nurse-maid may be, dependability and intelligence are qualities above everything else. Go to any city park where nurse-maids gather and note what may be seen. You will observe apparently competent nurses leaving the carriages containing their charges so that the full glare of the sun is in the baby's eyes, or you may see them allow older children to approach and even give undesirable foods to the infant, the nurse meanwhile reading or talking with another nurse or a "gentleman friend." Or you may see a pacifier or candy offered to a child in order to keep him from crying, as well as many other practices tending to develop bad habits in the infant. Even trained nursery-maids may allow, or even do, these things, but the really dependable nurse, trained or untrained, will never be guilty of them. It is well to remember that to prevent nervous disorders and bad habits in the infant, the nurse *must* have character whether or not she has technical knowledge.

ONE MOTHER'S CODE

In a recent number of the *Archives of Pediatrics* (vol. xxxvii, No. 5, p. 312) the editor printed a series of rules designed by a young English woman for the guidance of an untrained children's nurse, entitled: *A Mother's Instructions to a New Nurse,* these rules being in the

nature of military standing orders. The following extracts illustrate their excellent common sense, and show how they may help in the guidance of a nurse caring for children of the difficult pre-school "runabout" age.

"You are probably finding it rather difficult to get the children to obey you at once. I am, therefore, going to write the following hints, which may help you and give you an idea of my own methods. I look upon it as vitally important that they should obey at once even in unimportant things such as 'come into the garden now,' because if they get into the habit of hesitating to obey one can imagine an occasion when it might mean death to one of them. For instance, if 'come into the garden' is not obeyed at once, 'don't step off the pavement' might equally be disobeyed with terrible results:

"1. Never give a tentative order such as, 'I think it is time for you to come in,' say 'come in now.' Always conclude that your order will be obeyed at once until you see it is not. For instance, don't say 'come in now' and at the same time walk towards the child to take its hand to lead it in, but say 'come in now' and turn yourself towards the house.

"2. If possible never show annoyance. For instance, repeat an order if necessary in exactly the same voice, because otherwise they will wait until you are annoyed before they will obey.

"3. Never show surprise at wrong-doing. For instance, 'Oh! Pauline, you are not pouring water on Molly, are you?' Say, 'Pauline, stop pouring water on Molly.'

"*In Case of Disobedience.* 1. I give the children 25 cents each, good conduct money, on Monday morning if their conduct has been perfect for the preceding week. I keep in a book the number of marks, each 1 cent, taken off for little things, such as dawdling when told to do something, touching things that don't belong to them when they know they shouldn't, saying 'why,' not to gain information but to delay obeying, etc. You can also take off marks and let me know every evening whether you have taken any off or not, so that I can enter them into the book.

"To give an instance, if you should say 'come into the garden now' and they should not have obeyed by the length of time it takes to count about 10, just say, in a quiet tone of voice, 'one mark off;' then repeat your order, using the same words and voice as before. If disobeyed the second time say 'four marks off,' and if disobeyed a third time say, 'no cake for tea,' or 'stand in the corner for five minutes,' whichever is most convenient at the time.

"2. You must always win no matter what uproar it creates, but never under any circumstances slap or have recourse to corporal punishment. (I feel that it is quite unnecessary to say this to you, but I am putting it down with the rest.)

"3. The 'no cake,' or 'corner' may lead to a bad outbreak of temper. The best thing to do then is to put the child to bed and leave her there till she is quiet. This has only had to happen very rarely.

"4. Always be firm and get your own way wherever you are and whoever is there. Giving way to a child to save a scene in the street or on the stairs only lays up trouble for a future occasion. Children can see so quickly whom they can get the better of, and they are in the long run happier with, and fonder of, the people who can control them. Pauline and Molly never bear resentment for just punishment.

"5. Never give an unnecessary order. Remember, it is more important that they should be jolly and happy than that they should have clean clothes and perfect manners. The object of all the foregoing notes is in order to cut down 'don'ts' and 'mustn'ts' to the minimum. I think that their exuberant spirits have been greatly helped by this system.

"*General Notes.* 1. The children have no idea about being frightened in the dark because it has never been suggested to them, directly or indirectly, that there is anything in the dark to be frightened of. For instance, they have never been asked if they were frightened or praised for not being frightened. Never say 'it's all right, I am in the next room.'

"2. They have no fear of the supernatural, as they have never been told stories about spooks, bogies and ghosts, which terrify children so. When I tell them fairy stories I always say they aren't really true but just imagination stories, such as Father Christmas. Never tell them an untruth such as 'the policeman will come and fetch you,' or 'angels bring babies.'

"3. Never say when they are naughty 'I'll tell your mother.' They ought to realize that I will be told as a matter of course. It is apt to make children deceitful.

"4. Before stepping off the curb into the street, or stepping onto a carriageway in the park, or when a motor vehicle comes in sight on a country road, I make Pauline hold my arm and I will hold Molly's hand. You should do the same. On the pavement make them walk beside you, do not let them straggle all over the pavement. Never take them under any roof without my knowledge. No one else must be in charge of them for one moment without my permission, except their father, you or me.

"5. Do not think it necessary to amuse them the whole time. They are accustomed to amuse themselves. This is a good thing for them. By this I do not mean you should not play with them when you feel so inclined.

"6. Strangers take a great deal of notice of them and I am anxious that they should not grow up thinking themselves of more importance than any other member of the general public."

The danger which may arise when the nurse frightens children with "bogies," or tales of the dark or threats or penalties is spoken of in the foregoing "Instructions." In the case of the nervous or sensitive child this must be guarded against very carefully. Night

terrors, in which the child wakes up night after night, much frightened, often screaming, may be sometimes traced to a real fright, but more often to the playing on the child's imagination by stories of hideous things which come out of the dark. The nurse is frequently responsible for this, but members of the family, especially the older ones, may amuse themselves by telling fantastic or gruesome tales to children in order to watch the terror which these tales arouse. The ultimate effect of such recitals on the very impressionable child may be quite the reverse of amusing to the parents.

THE "SPOILED" GRANDPARENT

Older people, especially grandparents, often interfere greatly with the establishment of habits of discipline in the child. They are apt to resent the care and even the presence of the nurse, especially if she has had training in child care, and they may refer to systematic training as "foolishness," unknown in their day. As a matter of fact many of these older folks were most exemplary fathers and mothers themselves and in their own days of parenthood would never dream of allowing others to take the liberties with their own children which they rather insist on for themselves as a personal privilege with their grandchildren. It may be that as people grow older, they realize that most of the real pleasure in life is in childhood and youth, and reflecting on this are loath to allow the little ones to come under the inevitable rules that make for law and order. The nurse and the grandmother and the anxious mother sometimes form a triangle comedy of a new kind, but it is important, in the emotional stress which such a situation may create, that the infant's interests be safeguarded above all. *One* person in the household should be responsible for the child's wel-

fare, and whether it be the mother or the nurse or some member of the family, that authority and that responsibility should be supreme.

The part of the mother or nurse in instructing the older child in proper physiological habits will be taken up in another chapter.

THE NURSE FOR OLDER CHILDREN

For nursing and companionship to older children it should be remembered that an unusually high grade of intelligence is not necessary or perhaps even very desirable. A responsible and trustworthy person whose pedagogical age is not much over fourteen may be found to be more congenial to the child of four to ten years of age than even an advanced student of child psychology. But such a person must be methodical and stolid rather than emotional. Neurotic or epileptic or weak-minded individuals should never even be considered for the position of a nurse.

The physical and mental health of the nurse for the child of any type or age should be well investigated. Often pulmonary tuberculosis, syphilis, chronic tonsillitis or other contagious diseases will be found to be present. Nervous habits such as sniffling, habitual facial grimaces, tics, etc., as well as objectionable habits of speech should be discovered in time to prevent damage to the child. This is far from being an unimportant matter; it should never be neglected. The child is not only susceptible to body disease; his imitativeness and impressionability makes the formation of undesirable habits a frequent occurrence in early life.

No nurse, however good, can replace a good mother; and often the mother who confides her child entirely to others may pay a heavy penalty for her freedom. For

while some children would perhaps be better off in many ways if they were cared for entirely by a competent nurse, this is not true generally, and is the reverse of true in the majority of instances. As one writer says: "Who can consider it a matter to be treated with negligence or contempt that when they desert their own offspring . . . . confiding it for nourishment to the care of others, they cut off or at least loosen that mental bond, that tie of affection, by which nature binds parents to children? When a child is removed from its mother and given to a stranger, the energy of maternal fondness is checked little by little, and all the vehemence of impatient solicitude is put to silence. . . . . Having by this destroyed the foundations of natural affection, however children thus brought up may seem to love their father or mother, that regard of theirs is not natural, but the result of civil obligations and social opinion."

This is not the writing of any modern authority; it was given nineteen centuries ago as the opinion of the philosopher Favorinus in an argument with a grandmother who had told him her daughter would not have time to nurse their newly-arrived baby. Aulus Gellius gives the conversation in full in his *Attic Nights*. This again proves that there are certain human facts that cannot change—they are immutable. To revert to modern times, when that very modern philosopher, "Mr. Dooley," was told that up-to-date parents should not kiss their babies because it was unhygienic, he remarked: "I don't know. You'd better teach them to love you before they find you out."

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VIII

REST AND FATIGUE

"The truth is that happiness is the most powerful of tonics."

HERBERT SPENCER in *Education.*

* * * *

"Amuse him often with some blithesome tale
And take him out to breathe the balmy gale,
When air is pure, when clouds, when vapours fly,
And favoring west winds sport along the sky."

Pædotrophia; or the Art of Nursing and Rearing Children. Translated from the Latin of Scevole de St. Marthe by H. W. Tytler, M.D. (London, 1797).

REST AND FATIGUE

The question of the amount of rest that is needed by the normal child, especially after infancy has passed, is one which has not received the attention which it deserves. It may be that this subject has been passed over by writers because so many conditions exist to make hard and fast rules difficult to apply. Besides, as one psychologist puts it: "sleep or rest is like a medicine; its proper dosage varies with every individual. It may, in excessive amounts, be almost as harmful as any drug." Just as it is difficult to say exactly what quantity of food each child of a given age requires, so the right proportion of sleep and rest necessary to secure good health may vary within rather wide limits. One standard that has come into use in recent years is the weight and measurement test. If a healthy child on a proper diet does not gain weight and remains persistently below the normal average for his height, then it is considered proper to inquire as to the quantity and extent of the exercise he takes, and the actual amount of sleep which this child secures in the twenty-four hours. If, for example, a child of seven or eight sleeps ten hours at night and in spite of adequate feeding remains ten per cent. or so below the average weight of a child of the same height, it will be frequently found that an improvement in nutrition takes place as soon as arrangements are made to have this child rest for an hour or so in the afternoon. This is the basis of the only commonly used standard we now possess for determining the varying individual needs in the matter of sleep and rest in children of school age.

Of course, for a long time we have been accustomed

to associate excessive fatness with a tendency to sleep a great deal. Dickens' famous fat boy in the *Pickwick Papers* was in the habit of going to sleep at very inopportune moments, and Shakespeare made Cæsar say:

> "Let me have men about me that are fat,
> Sleek-headed men, and such as sleep a-nights."

Stoutness of the body is commonly associated with mental lethargy in the mind of the public, in spite of such conspicuous contradictions to this hypothesis as ex-President Taft, Gilbert K. Chesterton and many other men and women enjoying a local or national reputation for intellectual vigor. The truth of the matter is that while mental and physical laziness may produce a storage of fat in excess of the body needs, such a storage may also occur because of an individual peculiarity even in persons of remarkable mental and physical ability.

THE NERVOUS INFANT

The nervous child is usually a thin infant and his skin is loose on his body, while the normal child has a moderate covering of fat and his skin fits him tightly. As mentioned before, this type of baby is very restless, unusually active, and moves and kicks a great deal more than his perfectly normal brothers and sisters. Movements of the head are so frequent that some of the hair on the back of the head may be found to be literally worn away. The nervous child cries a great deal even in the first weeks of life. The normal child, excepting when he has indigestion, cries only at intervals of perhaps two or three hours and not for long periods. The nervous child is wakeful, and frequently does not sleep more than an hour or so at a time. The normal child, in the first weeks, sleeps practically all the time excepting when he is nursing. The tendency to

stretch his limbs and arch his back seen in the crying, nervous baby in the first months of life is called *hypertonia* by some medical writers, because of the greater irritability and tension, or tonus, of this child's muscles. Such children are the ones who spit up their food soon after feeding, have a persistent colic even when fed carefully, and often manifest an irritability of the skin which causes eczematous eruptions. The constant crying of these children, their failure to gain weight, their eruptions and their disordered stools are a source of the greatest worry to the parents, to the nurse, and no less to the physician. As it is sometimes found that parents of this type of child are themselves neurotic and "high strung," they are above all the persons least adapted to bear the situation philosophically. The lack of sleep and the more or less constant noise of the infant are weapons that frequently drive parents to seek the path of least resistance in attempting to obtain even a brief space of silence. Walking the floor, giving a pacifier, feeding large quantities of water, any or all of these expedients may be employed to borrow silence at usurious rates. This is especially true if the family lives in an apartment house and fears the comments of neighbors. And yet, through all the grades of nervousness in the baby, from the typical hypertonic infant to the one only a little away from the normal, the only certain road to permanent good results is one that must be traveled in company with patience and philosophy.

SLEEP OF THE NORMAL INFANT

The normal infant sleeps at first usually eighteen to twenty hours out of the twenty-four; after he is two or three months old, probably about two hours less. The length of time he will sleep at night at four to six months

of age will be about twelve hours, interrupted by one feeding. During the day the six-months-old baby will sleep from one to two hours both morning and afternoon. At a year, one nap of two hours and another very short nap will usually suffice, and in the second year only one nap is taken. Very often the child really does not sleep at this time, but the rest habit should be continued, and the child should be put to bed even if when placed in the crib he stands up immediately to assert himself.

It will be remembered that the abnormally nervous baby does not gain weight consistently like other children. This failure of nervous babies to gain weight normally is due in part to the unusual degree of mental and physical activity which they possess, to a deficiency in the normal amount of rest and sleep, and sometimes to peculiarities of digestion and absorption. These infants are usually precocious, easily over-stimulated and should be given especial care. They furnish when they grow up the active, mercurial type of individual, usually very persistent and inclined to have his own way.

NURSING THE NERVOUS INFANT

In the nursing care of this type of infant it must be remembered that the child should on no account be stimulated by talk, or play, or unnecessary taking up or "showing off" to relations or visitors. He should sleep in a very quiet, well-ventilated and rather dark room, when such a place is available. Such children must not be overfed, and the fact that they eructate feedings or have abnormal looking bowel movements does not usually mean that their mother's milk is not the proper food for them. These symptoms may really mean an inability to properly digest or absorb any kind of food in the amount that has been given at that particular time.

If any mother had as a guest an eccentric relative of whom great things were expected in the future, and if this visitor was so nervous that she jumped when a door was slammed, wept on little or no provocation, and displayed generally a razor-edge acerbity, she would be given the choicest privacy, the greatest possible degree of quiet, and the most careful consideration in everything. She would not be led out for exhibition to callers as a curiosity, or jumped up and down to quiet her jangled nerves. None of the methods of torture used on the little nervous newborn would even be thought of for her. But the baby is helpless against many of these customs of surviving social barbarism. Quiet, rest, care of the intestinal function, and the relief of gas-pains, care not to overfeed, encouragement of maternal feeding, prudence in not attempting to force a rapid gain of weight—all these measures supplementing a good physician's advice, will serve the purpose of safeguarding the nervous infant's welfare, and will in the course of time, make mother and child more comfortable. "In the course of time" is an expression used in this connection with deliberation. For time and patience are necessary. No course of treatment however complicated will serve to change this type of nervous system possessed by this mother or this infant; it can only modify an abnormal sensitiveness by removing needless irritants.

THE CHILD WHO "FIGHTS SLEEP"

Even before the child emerges from the period of infancy and becomes a "toddler" he may develop the habit which some nurses characterize as "fighting sleep," or he may sleep in such a light and fitful slumber that the slightest sound will awaken him. It is not necessarily a sign of a neurosis when a two- or three-year-old child

after a very pleasant and perhaps boisterous session with mother, and especially with father, is suddenly picked up and carried off to a dark and uninteresting bedroom, and then proceeds to cry at the top of his lungs. A certain amount of crying may occur at any time, and a definite habit of crying at this time may easily be established once it has started. Whether or not to abruptly leave the child to "cry it out" and set a time limit for the duration of the crying, beyond which comfort is to be given him, is a question much discussed by young mothers. Whatever opinions they may express on the subject, it is my experience that few mothers are Spartan enough to hold a stop watch when their babies cry for them from the darkness. And, for the child of from two to four years of age, I am convinced that this sort of treatment is not always the most judicious or obtainable of best results. What, then, should supplant it? Possibly one method of controlling this crying impulse may be found in an attempt to prevent its causes. Too much excitement just before bedtime is never even allowable. The presence of the jovial father and the tender mother at one moment and the inexorable nurse at the next may be too sudden a change of scene. And besides, the going to bed is usually such a passive thing. Children are usually "good" when they are interested in doing something. Turning the bath water on and off is a hugely amusing occupation, or for the older toddlers, putting shoes or stockings to bed, or helping the nurse to find a night-dress or doing some active thing in preparation for sleep, especially if it be in the nature of a game conveying the suggestion of bedtime, may be of use in diverting the very active young mind and turning it toward its proper suggestion-channel. When crying follows the exit of the nurse or the mother, a reassuring pat without conversation may help

a little. Under no circumstances should the child be taken up and petted. To exhibit any great amount of concern over the fact that the baby is crying is to encourage the practice by the young tyrant of this annoying vespers. If, without undue harshness, it can be borne into the little fellow's consciousness that yelling or screaming does not secure the desired results in sympathy, it is certain that he will after a time discontinue the practice.

In the case of the neurotic under-weight infant the problem of how far to go in this matter should be left to competent medical opinion. Sometimes the infant becomes almost hysterical as a result of continued crying and at times, though rarely, the use of hypnotic medicines is necessary to secure much-needed slumber. These should never, under any circumstances, be employed excepting under the advice of a physician.

THE CHILD WHO WILL NOT TAKE HIS NAP

When a child has reached the age of two or three he is in a very difficult period. His activity develops rapidly and he may decide at this age or later that he is wasting time by sleeping in the daytime. This opinion is usually manifested by his standing up in the crib or bed, and even by getting out of the bed if the nurse or mother leaves the room. But even if sleep does not come, the child should still be placed in a well-darkened room and a crib affording no chance for escape should be used, since this rest is required by the active child aged from two to four if he has had the normal amount of muscular exercise involved in the vigorous play activities of this age. If the child persistently refuses sleep it may be well to investigate just what amount of muscular activity he is allowed. Sometimes a play suit, a sand-pile and another child will cure this type of insomnia by the very old and

tried remedy—fatigue. The mother who keeps a runabout infant tied to her apron strings in a kitchen, or the nurse who confines the activities of her primly-dressed charge to a radius of three feet from a park bench, need not be surprised if sleep does not readily visit these children.

The child of from six to twelve, the so-called school age, scarcely ever presents the problem of non-exercise. The opposite condition has been found so often that in most of the larger cities weighing of the pupils in public schools and determining the ratio of weight to height has become a routine health measure. And whenever it is found that otherwise normal children are ten per cent. below the average weight for their height in spite of proper diet, it is taken for granted that they need more rest, and they are advised to take an afternoon nap. Very remarkable improvement in nutrition has followed this practice and children persistently below normal have been known to make consistent gains in weight with only one-half an hour additional rest in the daytime and no addition to the diet.

WAKEFUL CHILDREN AND NIGHT TERRORS

Among some of the abnormalities of sleep in nervous children are talking or muttering in sleep, or gnashing the teeth. This last-mentioned habit is usually associated by the laity with the presence of intestinal worms; but it is only because worms when present cause increased nervous irritability that gnashing of the teeth in sleep has been associated with them. Rarely indeed are these parasites found nowadays, while tooth gnashing is quite common in nervous children up to the time of puberty. It is excited or augmented by the presence of gas in the intestine, as after a heavy meal eaten late in the evening. The presence or absence of worms may be easily determined

by a microscopic examination of the intestinal contents. Mouth breathing, caused by adenoids, is a much more common cause of restless sleep in children than worms.

Night terrors, in which the child starts up with a loud cry, half awaking from a terrifying dream, have been briefly alluded to. These may be induced by horrible or

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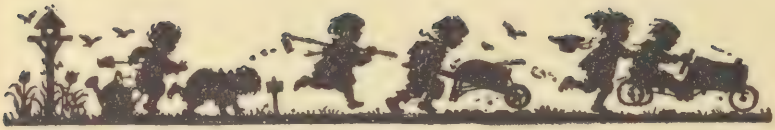
gruesome tales told by older persons or may have a basis in an actual fright. I know of one excitable eleven-year-old child, of unusually intellectual stock, who woke up one night and heard burglars in the house. She gave the alarm, and roused the household. Immediately after this occurrence she began to wake up screaming in terror every night, and in the morning would have no recollection of the experiences. A change of environment, proper suggestion at bedtime, and some sedative medication eventually banished the unpleasant terrors, but her con-

valescence was slow and tedious. The known fact, which came out within a day or two, that the supposed burglar was a servant who had forgotten his key and so made an informal entrance, did not in the least minimize or abate the attacks, since the memory of the fright was the cause of the terrors, rather than the actual facts of the occurrence.

SLEEP AND DIGESTION

The condition of the digestion and dietetic habits should always be investigated when night terrors occur. Reading of exciting stories, and seeing motion pictures, especially in the evening, should be taboo, and bedtime stories should be of the innocuous type. Exercise in moderation and not overdone will also have a beneficial effect in restoring normal tone to the nervous system in those subject to sleep terrors.

These are some general considerations of phases of the very important subject of sleep and rest, especially as concerned with the nervous child. But none of the statements and none of the hypotheses should be accepted as absolute for any particular case. Variations of degree may occur and do occur. We cannot exactly measure sleep requirements with either inches or ounces. "Experience," said Hippocrates, "is fallacious and judgment difficult." It is quite possible that this epigram was written after the Father of Medicine had attempted to find the underlying causes of sleeplessness in nervous children.



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IX

RECREATION IN THEORY AND IN PRACTICE

"Sweet recreation barr'd, what doth ensue
But moody and dull melancholy."

SHAKESPEARE—*Comedy of Errors.*

* * * *

"When I play with my cat, who knows whether I do not make her more sport than she makes me."

MONTAIGNE—*Apology for Raimond de Sebonde.*

* * * *

"Let them freely feast, sing and dance, have their puppet plays, hobby-horses, tabors, crowds, bag-pipes, etc., play at ball, and barley breaks, and what sports and recreations they like best."

BURTON. *Anatomy of Melancholy.* Pt. 2. Sec. 2. Mem. 4.

RECREATION IN THEORY AND IN PRACTICE

Recreation is, after food, the most important feature of child life and means more for the normal development of mind and body, for the continuance of good health and for the laying of a foundation of healthfulness in later life than anything else. Recreation for children should consist mainly of *play* out of doors, that is to say, they should forget themselves entirely in the midst of the use of muscles that call upon all their available energies. They should have the chance, if it is at all possible, to run and jump, to play with hoops and balls, with kites, and above all with other playmates a number of hours every day. It is not recreation for children to take a quiet walk in the park, sitting down near their nurse or mother and watching passers-by, dressed immaculately, and constantly warned lest they should in any way soil their clothing. Their clothing must be free and easy on them and they must be allowed to run around and to do some climbing and tumbling and rolling and throwing and get the chance to use every muscle in their bodies, as they will if they are given any sort of a proper opportunity to play.

THE VALUE OF OUTDOOR LIFE

Out-of-doors is an important part of the play prescription. It is not enough for children to play indoors, though of course in rainy weather that is better than not playing at all, and the more indoor provision for play there is the better. Even if a child had a well-equipped gymnasium in his home, it would not justify his being kept in it if the weather permitted an outing. The mere fact that it is damp outside is not enough to justify older children

being kept indoors. Rubbers and other apparel for damp weather are readily available. It is not enough for children to play quietly, for they ought to have the incentive to use their muscles to the fullest extent. Toys that tempt them to do this should be provided. For the younger child the kiddie car, for the older ones the Irish mail, which tempts to the exercise of the arms, the coaster wagon for the legs and body, the scooter for balancing and for the trunk muscles, and of course the velocipede, the tricycle and the bicycle and roller skates. Unfortunately the free use of these has become rather dangerous since the advent of the automobile. These mechanical stimulants to locomotion, however, because of the interest which they arouse, are extremely useful in promoting bodily exercise. It is interesting to realize that the scooter, one of the few new toys that have been invented in recent years, was the invention of city boys themselves craving exercise in spite of limitations of money and space. Nature, if permitted, would tempt them to all the exercise they need.

THE ELEMENT OF SPORT NECESSARY

Just as far as possible there should be an element of sport in all exercises for children, so that they have such occupation of mind with it as keeps them from thinking much about themselves. Provided they are reasonably well and have no heart or lung disease their own natural tiredness can be looked upon as the best guide and director as to the amount of exercise to be taken.

It is rather important, however, that children of about the same age should play together; for when there is much difference in their years the younger ones are stimulated to do more than is good for them by the fact that their elders, who have more strength, can keep up the games longer. Two or three years of difference in age, however, except when

the children are very young, makes very little difference, and older and younger children in a family often prove to be the best possible companions. Indeed one of the reasons why the single child in the family, or one child of a family of two, especially when they are of different sexes, often proves to be lacking in vigor and strength and health, is that these solitary children have no companions to play with who are able to tempt them to use all their bodily functions to the fullest advantage. It is a matter of common observation that such children are prone to get into quieter sedentary ways, not only because of lack of stimulation to play, but also as a result of their almost constant association with grown folks.

THE MENACE OF THE MOVIE

In our day there is a distinct tendency for city children to get no inconsiderable part of their recreation in attendance at moving picture theatres. This represents an unfortunate development in social life, for the children who go to the movies in the afternoon have been in class for some five hours, sitting down most of the time, have had very little muscle exercise, and now sit down in cramped positions in a stuffy moving picture theatre for several hours more. These two occupations consume all the daylight hours so that there is almost no chance for recreation in the open air on such a day. On Saturdays and Sundays, the afternoons, at least, used to be given almost completely by school children to exercise in the open, and usually to healthy sports, and the forgetfulness of self that comes in the midst of games. Now for a great many, one, at least, and sometimes both of these afternoons are spent in the motion picture theatre.

Professor Patrick of the University of Iowa has dis-

cussed the problem of the attendance of children at the movies in a very suggestive way. He said: *

"As regards the movies, one point in their favor has been noted. They are accessible and available. They satisfy vicariously the love of adventure, the roaming instinct, the delight in the new and the strange and the wonderful. They are absorbing, diverting the weary soul from its troubles. They relieve the strain upon the will by the plot-interest, which carried the observer along without effort. They bring a glimpse of fairyland into some lives that are drab and prosy. Those who cannot even dance may here participate in the sight of dancing. To those who have no beauty in their daily surroundings, beauty is brought in many forms upon the screen."

THE PHYSICAL DISADVANTAGES

All of these advantages possessed by the movies as recreations or rather diversions for the mind are far more than counteracted by the disadvantages which they present as regards recreation of the body, and it is the body particularly that children need to have recreated. Indeed there is so much in the movies to make them absolutely harmful from the physical standpoint that it is very dubious whether, taken all in all, they do not do an immense amount of injury to the rising generation. Professor Patrick said:

"If we refer again to our table of tests of recreational factors, we find nearly all the elements of good play wanting in the movies. Good play is out of doors and involves the larger fundamental muscles of the trunk and legs, and for children this is primary and indispensable. They must be active in play and all sedentary people must be active in play. It is bad enough that children should be confined in

* *The Play of a Nation, Scientific Monthly,* Dec., 1921.

a schoolroom five precious hours of the day. It is worse if they are penned in between a desk and a seat. For such children to spend still other hours of the day or evening or any hours of their holidays in confinement is serious, and especially in these days of universal reading, when old and young alike spend so many hours sitting, reading fascinating books of fiction, and interesting magazines and papers.

"In the moving picture theatre the bodily confinement is complete and uncompromising. In the schoolroom the child can at least wriggle. In the movies the attention is so rapt as to result in a statue-like rigidity of the whole body for hours. For adults this is unfortunate; for children it is fatal. Many moving picture theatres are stuffy. Most of them are crowded. The physical conditions are thus the worst possible from the standpoint of recreational needs."

THE ABUSE OF THE EYES

Professor Patrick also points out to what an abuse the eye is subjected in attendance at the movies, and emphasizes at the same time how much more important the ear is for recreation than the eye. It has been the custom to quote Horace and suggest that what was presented to the eye was retained ever so much more faithfully than what came only to the lazier ears; but recent psychological investigations have shown that the attention is much better concentrated on the hearing than on the sight, and that therefore a much more complete diversion of mind is obtained in that way.

"As regards the use of the sense-organs, the eye, overworked among our modern reading people, gains no rest from moving pictures but is taxed to the very utmost and kept under strain for hours. To what extent the eyes will suffer from the moving pictures I am not here discussing.

I am only pointing out the failure of the movies to conform in this respect to recreational requirements. The relations of the eye and ear to our modern life are such that good music is of far greater value as recreation and relaxation than any appeal to the eye. If our play is to take the form of an entertainment on the stage, good music in any form, whether in concert, recital, folk songs, or opera, would seem to be deserving a very high place.

"Incidentally it should be mentioned here that in the history of the race the most intimate and human relations are associated with the voice as used in speech. The Greek tragic drama, which drew whole populations of a city to the outdoor stage, depended for its powerful appeal largely upon the human voice. The spectacular character of the modern theatre seems like a distinct loss. But when this is carried, as in the moving pictures, to the point where human life and society are wholly divorced from the expressive and meaningful tones of the voice, we seem to be living in a desiccated and dehumanized world, from which all intrinsic worth has departed. The visual world depicted on the screen has movement, plot-interest, strangeness, novelty, excitement, intensity, but lacks the elements which are soothing, tranquilizing and harmonizing. It is neither relaxation nor recreation."

MOVIES AND EMOTIONAL STRESS

There are, of course, other objections to the movies, as recreation for young folks, besides their utter lack of that physical exercise which is so valuable, that deserve to be discussed. While they, by their thrill of interest and the thrall of the presentation of novel situations of intense attractiveness, bring about an absolute limitation of motion, they make a profound call on the emotions. They may awaken feelings that it would be much better

to let slumber and they foster emotivity to a rather serious extent. Absolutely the best antidote for this premature awakening of the emotional life is exercise in the open, which takes heat away from the system and keeps that heat from being transferred to the nervous and other systems, to the detriment of the individual. Healthily-tired children sleep well and usually without dreaming, while those whose emotions have been harrowed up in various ways are likely to dream and toss, especially if they have not used up their daily supply of energy, as they should.

It seems likely that, in spite of this, the movies will continue to be the favorite resort of children, and that some parents will continue to take them, but it must not be forgotten that recreation of this kind, instead of doing good, does harm. In a good many of these cases it is the desire of a parent at least as much as the child that is the cause of the attendance at the movies. In this regard the old story of bringing the young folks to the circus for the sake of all they would learn there as well as the fun it would be for them, is repeated, though it was well understood with regard to the circus that the parents' desire to see was at least as strong a motive as that to have the child enjoy itself.

There are many undesirable elements and suggestions in the movies which prove particularly disturbing for nervous children, and so far as possible they should be kept from attendance at the more alluring of the movies at least. Sex problems of various kinds, stories of passion and violence, above all suicides, are not proper subjects for nervous children to see. The suicide rate has been going up in recent years, but the age at which suicides are committed has been going down constantly, so that young folks at ever younger and younger years are the victims

to this tendency to self-destruction, which is a feature of civilization. The suggestion of suicide as exhibited on the screen may prove, at a moment of intense discouragement, or depression, an incitement to imitation of the act which may prove unescapable under the stress of circumstances in a nervous individual. What is true of suicide, against which there is so strong a natural abhorrence, is of course eminently true of sex divagations, to which there is so strong a natural tendency. The familiarity with other crimes so often suggested inevitably breeds, as the old proverb runs, a contempt for their dangers that represents a very unfortunate preparation for life.

The movies have, of course, many other disadvantages which make them eminently undesirable as recreation for children and above all for nervous children. The mentally retarded child probably finds more of complete self-absorption in the movies than anywhere else. This only makes them all the more dangerous for such children, and the subject has been summed up very well by Doctor Poffenberger of Columbia University in an article on *Motion Pictures and Crime* in the *Scientific Monthly,* April, 1922.

THE DEFIANCE OF LAW

"Motion pictures, containing scenes vividly portraying defiance of law and crimes of all degrees, may by an ending which shows the criminal brought to justice and the victory of the right, carry a moral to the intelligent adult; but that which impresses the mind of the mentally young and colors their imagination is the excitement and bravado accompanying the criminal act, while the moral goes unheeded. Their minds cannot logically reach the conclusion to which the chain of circumstances will drive the normal adult. A little questioning of such persons who attend moving pictures and read stories will indicate

how different are the factors which impress their minds from those which impress the intelligent adult. This failure to grasp the significance of the story is even more pronounced when it is conveyed only by the posters advertising it. Here it seems to be the rule to portray only the most glaring and exciting portions of the plot with no possibility of right interpretation. A survey of any groups of posters advertising motion pictures, with only their direct appeal in mind, will show a surprisingly large portion of them suggesting murder, burglary, violence or crime of some sort. The pistol seems to be one of the commonest of the stage properties of the motion picture advertisement. And a very frequent pose is that of the frenzy of rage and the clenched fist ready to strike a blow. Those young people, and even adults, who are limited to the advertising posters for their entertainment, may get evil and anti-social suggestions from them. Considering the almost unlimited audiences which the advertising posters command, their careful control would seem a greater necessity even than that of the play itself."

The taking of infants to the motion picture auditorium is of course inexcusable. Yet in the cities one sees numerous baby carriages standing outside some of the smaller theatres. The ill-ventilated auditorium, the alternating bright and dark lights, the clang of music, possibly liberal portions of candy to keep the youngster quiet, followed perhaps by a ride in an automobile homeward bound late at night—this is the price many infants pay for their mothers' desire for entertainment. That it is a price that will result in serious damage to the nervous system of these children goes without saying, since it is a perfect orgy of over-stimulation.

No one will dispute that motion pictures of the proper

type, given at the proper time and *occasionally,* with subjects suitable to the child mind, may be legitimate means of amusement, and this criticism is mainly leveled at the indiscriminate patronage of motion picture theatres by children of tender years who need other and more beneficial play.

ILL-REGULATED READING

What is said of the movies may be repeated with regard to the reading of magazines and novels, the main interest in which consists of the nervous excitement in which the reader is kept as the result of working up of details of sex incidents and criminal episodes of various kinds. A good many parents are inclined to think that if children are reading, surely there can be no harm in that, and that such quiet occupation must prove good for nervous individuals. Some doubtless are inclined to think that any occupation with a book or magazine, any kind of reading, must surely be improving for the mind. Passional reading of any kind, however, may prove to be exactly of opposite effect and have a disturbing influence, especially on individuals of a certain nervous instability.

The home games and amusements of various kinds which were so common in old times, and unfortunately now have gone out to a very great extent, made ever so much better modes of recreation than the movies or novel and magazine reading. Checkers, dominoes, backgammon, even parchesi, were all excellent forms of amusement with some mild excitement, rather pleasant social intercourse and attractive occupation of mind. The new vogue of the picturesque game of Mah Jong shows that fashion has an influence in such amusements. Chess, though usually thought to be too serious an intellectual

pursuit to represent restful recreation, is ever so much better for growing nervous persons than the excitement of the emotions which has now become the commonest element in young folks' recreation. Even cards, in spite of the prejudice against them which some people still have, though fortunately the objection to them is dying out to a great extent, may well form an excellent means of recreation. A good card game is gripping in its power of preoccupation of mind, and provides that mental diversion which is so important for real recreation. Like chess, cards even when played seriously uses an entirely different part of the brain to that which is employed in most mental operations, and therefore provides an opportunity for the flow of blood to another set of cells which secures the best possible chance of rest for others.

THE SO-CALLED FUNNY PICTURES

In recent years children have come to spend a good deal of time on the so-called funny pictures of the colored supplement. This seems particularly unfortunate because the pictures themselves are frequently lacking in artistic quality and the subjects of the jests are usually practical jokes of one kind or another in which somebody suffers confusion and shame or is made the butt of physical violence or ridiculous accidents. The people who thus are made the objects of jokes are often elderly, sometimes are parents, so that the sense of reverence and respect is almost inevitably sapped by the frequently repeated occupation of mind with such subjects.

It is extremely important not to talk crime before children. Little pitchers have big ears, and it is surprising how children will hang around and listen faithfully and pick up all sorts of suggestions from the conversation of

others. This represents indeed another reason why children should not be kept too much with grown-ups but should do their playing very largely with others of about their own age. There are certain dangers connected with that because some of the children have been listening to what their elders said and like to retell it to those of their own years, but the less of sophistication and old-fashionedness the better. The surprise is to see how often mother and sometimes even father seems rather to be proud of the old-fashionedness of the children. They should have their childhood, but this is not always easy to secure for them. What they need above all is a chance to exercise their bodies, leaving their minds to develop in connection with their bodily exercises, for nothing so sharpens intelligence and makes observation acute and sharpens reaction for defense and offense as healthy play. When the whole spirit of the child is engaged in this there is the best possible prospect of the securing of that consummation so devoutly to be wished, a healthy mind in a healthy body.

THE LAUGHTER OF CHILDREN

Laughter constitutes an extremely important element in the recreation of children and should be encouraged in every way. Man has been defined as a laughing animal, *animal risibile,* and this constitutes as good a definition as that he is a rational animal. From their very early years children laugh. The habit of laughing, and the having of people around them who themselves are inclined to laugh, and who therefore encourage the children in this very healthy exercise, is extremely important. For laughter not only exercises the lungs and the diaphragm but it also produces at the same time an excellent massage of the liver.

Children smile even in the earliest months of life, and they laugh well before the end of the first year, and this is as natural as can be. For children who are likely in any sense of the word to be nervous, that is for children who come in families where nervousness is already manifest, it is well to deliberately create the habit of laughter by directing definite efforts in that direction. It has often been said that if the corners of the lips are turned down one does not digest nearly as well as if they turned upwards or were drawn straight across, and this upward turn of the corners of the mouth can become habitual.

LAUGHING AT THE RIGHT THINGS

It is important, however, that children should be encouraged to laugh even from their early years at the right things. Unfortunately the tendency in our time is toward laughing at a great many things that it would be better that children were not encouraged to laugh at. We all know how keenly children look for jokes in comic papers and how early they form habits in this matter; but if laughter encourages lack of reverence for older people then it is unfortunate. When from very early years children's minds become accustomed to associating that very pleasant and valuable function of humanity—laughter—with poor art, and trivial jokes mainly founded on the infliction of pain or of indignities on other human beings, the consequences are likely to be lamentable. It will be difficult for them as they grow older to have an appreciation of good art or to associate their laughter with the really humorous things of life. John Ruskin once said: "I believe that there is no test of greatness in periods, nations, or men more sure than the development, among them or in them, of a noble grotesque; and no test of com-

parative smallness or limitation, of one kind or another, more sure than the absence of grotesque invention or incapability of understanding it." And then he added what is so interesting in connection with the recent Dante celebration all over the world: "I think that the central man of all the world, as representing in perfect balance the imaginative, moral and intellectual faculties, all at their highest, is Dante; and in him the grotesque reaches at once the most distinct and the most noble development to which it was ever brought in the human mind."

GROTESQUE VERSUS BURLESQUE

It is not the noble grotesque but a trivial burlesque that unfortunately has come to be the subject of humor in our time. The series cartoon is occupied very often with slapstick humor, or with the suggestion of the lack of character in mankind. Men have their faults but a great many of them succeed in overcoming them, yet the weaknesses of mankind are made the subject of caricature until the young almost inevitably have the impression produced that weakness yielded to is the definite characteristic of human beings. When asked what temptation meant, the little girl said that it was something you yield to, and that must be the impression produced on young folks by a course in the serial cartoons, especially when taken in daily doses or at least weekly bottlefuls.

Very different from this laughter at the incongruities of mankind, which almost inevitably begets something like contempt after a time, is the healthy, happy, hearty laughter of children in play with each other or with grown-up people of sunny, cheery, laughter-loving disposition. It does not take much to make a child laugh, and that is all the more reason why whatever does make it

laugh should not be of a kind in itself degrading to human nature. Long ago Pope said:

> "Behold a child by nature's kindly law
> Pleased with a rattle, tickled with a straw,"

and the trifles of life will suffice to provoke laughter which should not be at the serious side of existence.

THE ESSENTIALS OF PROPER RECREATION

The child's recreation should be taken in free-hearted sport, whenever possible, out of doors. This is extremely

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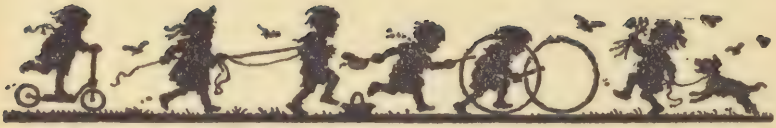
important for nervous children. Parents should see to it that hours of recreation are spent in games of various kinds and not at the movies, except occasionally and under careful supervision; nor in reading, for most modern reading is disturbing and tends to make people neurotic. The more muscle exercise there is the better, the more the spirit of competition and fun enters into recreation the more wholesome it is; but above all the child should, as far as possible, have association with children of his own age and together they should do things by the hour. Give children this opportunity and these conditions and their

own instincts will enable them to get more real recreation than any amount of sport planned for them by grown-ups. When left to themselves their play brings initiative and proper mental development which is of great educational value since it gives them resources in themselves that are extremely precious for times of nervous crisis later on in life.



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DISCIPLINE AND THE NERVOUS CHILD

"The words that a father speaks to his children in the privacy of home are not heard by the world, but, as in whispering galleries, they are clearly heard at the end and by posterity."

JEAN PAUL RICHTER.

* * * *

"O! had it been a stranger not my child
To smooth his fault I should have been more mild."

SHAKESPEARE—*Richard III.*

* * * *

"The greatest of faults, I should say, is to be conscious of none."

CARLYLE—*Heroes and Hero Worship.* Ch. II.

DISCIPLINE AND THE NERVOUS CHILD

Careful discipline is probably the most important condition of their early years for nervous and irritable children if we would make effective whatever happiness they are destined to enjoy. Proper training is of value not only in saving the friction of life, which is likely to be developed to a considerable degree where nervous children are concerned, but it is also curative of the tendencies to overreact to those irritations, desires, and emotions which are so characteristic of such children. To surround growing children generally, but above all the nervous child, with a home atmosphere, as far as may be, of absolutely regular life, with as little excitement in it as possible, is the ideal to be striven after. Their meals should be taken by themselves, and consist of perfectly simple nutritious materials, since when children are away from the incitement to eat savory dishes of various kinds that are prepared for the jaded appetite of older people, their more simple foods will do them ever so much more good than if taken surrounded by adults, where sometimes they are made the centre of attention. This misguided "noticing" of children at table takes their minds off their eating, but above all tempts them to crave sweets, or tea or coffee, and other unsuitable things, to the serious detriment of their appetite for proper foods. Unquestionably such parental laxity frequently fosters the nervous tendencies of the young child.

A grain of prevention in this respect in early life is worth ever so much more than a pound of cure later on in life, and the nervous child will be saved many irritations which react so unfortunately upon the development of its

nervous system. If he has the chance to play with other children, if he is not too much with grown-ups, to foster his self-consciousness, if he is much in the open, sleeping on a porch, or close to an open window most of the year, and is not forced at school, there is good hope of making even the nervous child normal or almost normal.

THE NERVOUS PARENT

Unfortunately nervous children are as a rule brought in intimate contact from their earliest years with those who have something of their own nervousness, their near relatives, and who are, for that very reason, largely incapable of exerting discipline in the way best fitted for the child. With their environment dominated by those who are at least as nervous as themselves, who easily react exaggeratedly to irritations, nervous children are likely to acquire as much of their tendency to over-react from nurture as from nature. Indeed there has gradually grown up the feeling among physicians that the environment counts at least as much as heredity, and often even more, in the development of nervous conditions in the child. Their parents particularly, or at least one of them, is likely to react readily to irritation, and almost needless to say the child very often notices this. Partly by imitation (for example means ever so much more than precept to children) but mainly because of failure to suppress their tendencies to irritation, since they see that those around them do not, the child's irritability is increased. Most of these children, unless by some very good fortune they fall into the hands of a placid, careful nurse of strong character whom they learn to love, miss the early training that would be most precious to them. The worth of such a nurse in a nervous child's life is that of a "precious jewel from the farthest coasts" and if secured

she should be valued as such and every effort made to retain her.

"CHILDREN NEED CONTROL"

Miss Lynch of the National League of Teacher-Mothers has dwelt rather emphatically on the necessity for discipline for children and what she has to say applies even more to the nervous child than it does to normal children. As she says: "Children need control. They need to feel a strong will directing, restraining, confining, limiting and steadying them. Only in this way can they acquire real strength of will and character as opposed to stubbornness and wrong-headedness." Much more of their future life and its success depends on the habits acquired in their early life than almost any other period. It is particularly true that good habits may be formed that will serve as the basis of character and make straight the path of destiny. The old saw said, "Plant an act and reap a habit, plant a habit and reap a character, plant a character and reap a destiny." The home training of these children probably means more than anything else for the success of their future careers and for the suppression of the nervous tendencies which they have, but may learn to control, or at least to keep so well in the background of life that they serve but little to interfere with life's normal activities.

DISCIPLINE A TABOOED WORD

Discipline is not a favorite word in our time and has to a great extent been displaced by interest. It must not be forgotten, however, that for the great majority of human beings interest must play a minor rôle in life. There are a number of things which we do not care to do, and in which often we are very little interested, and yet

we know that we must devote ourselves to many disagreeable tasks if we are to make a reasonable success of life. For keeping us at our occupations and duties, discipline, that is the habit of doing things even though they are hard, is extremely necessary. Nervous children are particularly likely to grow up as ne'er-do-wells if they lack this discipline. It becomes very easy for them to think that any occupation to which they have to apply themselves is too hard for them, and any study which requires very special effort is simply beyond their capacity. They easily join the class of those who think that the world owes them a living without their having to do any hard work for it. Even when such individuals have come from the best family stock, they are caught frequently in forgeries or embezzlements or confidence games of various kinds, stock promotion swindles and the like, or in taking advantage of women, cheating them into matrimony or inveigling them into financial difficulties under promise of matrimony or sometimes by actual bigamy. The records of our police courts show an ever-growing number of this kind of criminals, not a few of them from well-to-do, thoroughly respectable families, who become amenable to the criminal law. Their history often reveals the nervous, irritable child, undisciplined in early life and now practically incapable of controlling his impulses.

KINDNESS ALONE NOT SUFFICIENT

Much has been said in recent years about the necessity of training children only by kindness and without any harshness or hint of punishment—that is, by rewarding them when they do well or when they do what they are told, and by simply indicating quietly one's displeasure when they fail to do as they should, or perhaps even do what they have been told not to do. There is no doubt at

all that certain people who are particularly tactful and who have their own characters well under control, and who have an ideal disposition, can accomplish much in this way. They can do so particularly with their own children when these have natures corresponding to their own. Unfortunately, however, the average human being is not ideal in character or disposition, and the average child is far from ideal in disposition or character. Kindness will do a great deal for a certain number of children, but it will not accomplish all that is needed for the training of character in average children. It will fail completely in a large number of children who are probably born with definite tendencies toward insubordination and with an exaggeration of that natural negativism which makes practically every child, by its first impulse, set itself up in opposition to anything that is suggested to it. Human nature generally has that tendency in a very marked way. It is often a very valuable trait when people are older. It may be, and often is, a very unfortunate trait in children, and as such needs to be overcome if the child is to secure proper value from its training up to adult life.

If children are trained by kindness alone the physician would be likely to feel that there was distinct danger of young human beings forgetting that nature's discipline is rather step-motherly in its austere severity toward those who fail to obey its laws and directions, in what oftentimes seem to be rather trivial matters. Army medical departments have found that in order to prevent the spread of typhoid fever, that scourge of armies in the field which raged before the introduction of typhoid vaccination, they had to make an absolute rule to court-martial anyone who drank water that had not been provided for them with the approbation of the medical department. Even death did not seem too severe a penalty to suggest for what might

seem to be a slight violation of army discipline, but was in reality one which would endanger the lives of a great many. Many of nature's laws are of that kind. They must be kept or there will be serious consequences. Violations may lead to death, or still worse, to diseased conditions which will endure throughout a long life, make the victim miserable and unfortunately often be carried on to his descendants. This is nature's way with humanity. In the physical order you must do what you ought to do or there will be the severest kind of punishment meted out to you.

LESSONS IN HUMAN NATURE

Children, therefore, must be made to understand even from their early years that they must not do what they are told not to do or that definite penalties will follow. They will have to suffer something for their refusal to obey what they have been told. It is true that some of them might be made to do it by the promise of reward for keeping the law, but experiments on animals have shown that when they are to be trained to perform tricks or "do stunts" of various kinds, their training can be made effective by reward, but it takes a much longer time and the result is not nearly so certain. On the other hand if they are not only rewarded for every time they do something correctly and promptly but also punished for every failure to do it, they learn the lesson in about one-half the time they would if there were reward alone and the lesson is more perfectly learned.

Human traditions in anticipation of these experiments are very old. There was a time, about a generation ago, when the idea of evolution had taken such a firm hold on the minds of a great many people and especially among the educated classes that many of them were inclined to

feel that the people of the past were simply to be pitied because they had not lived to see our glorious time when evolution of mind and increase of knowledge made the old fogyisms of the past and especially the necessity for the discipline of children seem absurd. We have changed all that and have come to appreciate that what has been a common teaching in humanity for many generations and still more for centuries is surely founded in human nature and must be respected.

WHAT THE JUDGES OF JUVENILE COURTS BELIEVE

There are now probably a dozen of judges in this country who are on record with the emphatic opinion that a great many of the boys and girls under sixteen who are brought before their courts as violators of law would not be there if they had only been punished properly when they were young. They are particularly insistent that whenever young folks are inclined to be bullying towards younger children, when for instance a boy " picks on " the weaker ones around him and makes life difficult for them, he must be punished and made to feel pain so as to learn not to impose on those weaker than himself. This is a much more important rule for boys than it is for girls, but it has a place under certain circumstances even for the gentler sex. Most of the judges, too, are quite sure that when children begin peculations of various kinds, the taking of things that do not belong to them, especially taking them away from those who are younger and weaker than they are, such violations of the social order must be corrected by the infliction of physical pain on the part of those who are older than they are. As we shall see, habits of deception, lying and the like must be corrected, but above all, prevented in the same way.

SENTIMENTAL PSYCHOLOGY

A sentimental psychology of our time proclaims that the child should never be punished. Its advocates represent the little ones as helpless individuals over whom parents or caretakers tyrannize somewhat in bully fashion, and they proclaim such conduct brutalizing for both parent and child and as sure to be resented to the detriment of parental influence and unfortunate effect upon child character. The only way to judge of such an opinion as this is to ask those who in their own childhood were often punished whether they think now that it did them good or harm. Most of us who are now past middle life were spanked more than a few times as children. I have asked many as to the effect of it. They are practically a unit in declaring that it did them good. Those who had such a personal experience are the ones who must have the right to an opinion in the matter. I have met a few people who felt sure that they were profoundly disturbed by punishment inflicted on them, but almost as a rule these were not the ordinary normal people but were curious exceptions in disposition to the ordinary run of humanity. Often, too, they had been punished but once and remembered it very poignantly, and on a number of occasions I have felt that if they had only been punished more frequently they would not retain their rancor over it.

SENTIMENT, REASON AND OBEDIENCE

Sentimental affection to the point of indulgence instead of representing anything like real parental affection represents on the contrary that very commonly lamentable tendency in humanity to avoid trouble and take the easier way. It is extremely important that what is

sometimes called good nature should not be allowed to assert itself in the care of children, but above all in what concerns the management of the nervous child. A witty Frenchman once said, "Parents must as far as possible be like the Father in Heaven in regard to their children. God is good, but a good-natured God is a contradiction in terms." What he meant was, I suppose, that the making little of child faults, and the complacent feeling that somehow or other everything would get right of itself was unworthy of a parent who had the best interests of his child at heart. Of course the real crux of the matter is that the old joke of the comic papers that it hurts the parent more to discipline the child than it does the child, is only too true. Men take the advice given by a precocious child to its father, who, when that parent said that it hurt him to punish, replied: "Well, papa, do spare yourself as much as you can."

Parents who are at all nervous themselves find it easy to make excuses for not maintaining discipline over their children, and especially for not requiring constant and prompt obedience. Any laxity in this matter, however, is sure to meet with its own punishment, which falls upon both parent and child. Unfortunately for good-natured parents, who prefer to let things go rather than assert themselves, nature is inexorable in the matter of obedience to her laws. Violations of them are inevitably punished, and even the breaking of some very simple laws may be followed by severe suffering or perhaps death. If children have not been taught in their early years to follow law and obey directions, no matter how hard it may be, they are likely to suffer from all sorts of evils, physical as well as moral, as a consequence of their neglect to keep laws as

they should. Parental laxity is not love, but very often laziness and lack of character. It acts in the same way as hate, for it produces in the children a predisposition not to keep laws, and this inevitably works out to their serious detriment. If the habit of obedience is not established in early childhood it is doubtful whether it will be established later without the exercise of rather severe harshness. At a rule the habit of obedience can be established without resort to harshness, although not without punishment.

THE ARGUMENTATIVE CHILD

Above all, in the first few years of existence children should not as a rule be allowed to discuss the matter when they are asked to do something reasonable. They often exhibit surprisingly early in life the tendency to ask why they should do something or other that has been imposed upon them. Parents often permit themselves to think that this represents a certain precociousness of budding intelligence or even a very precious exhibition of early reasoning powers of which they are rather proud to tell their friends. It is more frequently than not a characteristic example of that negativism that often is seen even in quite young children and should be repressed.

It seems better as a rule to say simply, "Because your mother tells you to," or "Because daddy thinks you ought to do it," as an all-sufficient reason, rather than to allege the motives and discuss the reasons for which it is to be done. The fewer words that are used in giving commands the better. Plain and simple directions rather than any elaborate reasoning are suitable for the child. Insofar as the childish intelligence pays any attention to the

reasoning it does so only to pick flaws in it. When a child is asked to do a thing, he should invariably be required to do it, even though it takes some time and patience to make him do what he was told. Any deviation from constant rule in this matter is sure to be reflected in the child's future growing unreadiness to respond to directions.

AN "ADOPTED MOTHER'S" EXPERIENCE

Fortunately there is a change coming over popular views in this matter of punishing children that represents a definite reaction to old-fashioned ways of thinking in the matter. Experience has again been a valuable teacher though it has proven rather costly for many of the rising generation. The recently-recorded personal experience of a well-known literary woman is very valuable, and has its value further enhanced by the fact that it came with regard to her adopted child. She did not believe in spanking, and the psychiatrist who was her counsellor at the time of the adoption of the child advised her to "lift the fear of corporal punishment" from the boy's mind. She did so at once, and finally became "firmly convinced that a child could be ruled by love alone." Then came experience. She did not like lies; he persisted in lying. She tried everything that she could devise or had read about. This lasted a year. The rest is in her own words: *

"Then came a lie so extraordinarily ornery that I dared not experiment further, and I offered the child his choice between a complete confession and a whipping. He refused to contemplate either, insisting that he never lied. I whipped him severely. When it was over, he was cry-

* *The Adopted Mother* by Honore Willsié. (*Century Magazine*, September, 1922.)

ing bitterly. 'Why, oh, why,' I begged of him, 'did you force me to do this?'

"Suddenly he threw his arms about me.

"'I began to lie after I found out you didn't believe in whipping children,' he sobbed. 'It was a lie. I've told you lots of 'em. But I never thought you'd lick a fellow. I'll try to quit now.'

"And he has tried. He never told one of the mean lies again, and the fear lies are slowly, but surely, disappearing. Curiously enough, the whipping served, too, to increase the sense of companionship between us. I was no longer a mere mother. I was a strong-armed person, something like a fellow who recognizes the value of brute force in another fellow's training. I am now the recipient of many confidences about school fights, in particular why the battles are fought and what is the net effect on the loser."

That was the boy, but it might be expected to be quite different for a girl, yet she, too, had to be whipped. Indeed the editress has found the faults of her girl more difficult to handle than those of her boy. "She never forgets or fails to take advantage of any weakness or lack of determination on my part." And then she adds what will be illuminating for parents, actual or adoptive, who may have neither the power of observation nor the facility of expression of Miss Willsié: "They both apparently have one blanket rule of their own. Never in any circumstances to obey one of our rules until they have tried by every method conceivable to wear us down on its enforcement."

"MUST" AND "DON'T" CANNOT BE DISCARDED

The same wave of modern psychology in its relation to the child which insisted on the condoning of disobedience in children so as to allow them to develop their

personalities untrammelled has also sometimes gone to the extent of proclaiming that those who are the dominant factors in the child's environment should never say

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"Don't," and also never say "Must." Unfortunately for the success of any such child psychology as a rule of parental conduct, there are too many serious dangers into which the child is likely to run in life owing to inexperience if any such rule is followed.

TEACHING SELF-CONTROL

We have heard much in recent years in commendation of the condoning of disobedience in children on the ground that they must be allowed to develop their personalities or their individualities or that their initiative must not be interfered with nor their privileges as quite independent human beings be infringed upon. Parental negligence or soft-heartedness makes excuses for itself on the plea that correction or repression in the early years renders children weak-spirited and makes mollycoddles of them. All human experience, however, runs exactly counter to this complacent justification of the parent's weak-kneedness. It is exactly those who have had to go through hard things, who have had to do difficult tasks under the stress of necessity and to encounter trials of various kinds which had to be borne or they would prove overwhelming, who develop what is best in them, and above all prove capable of doing the difficult things of life and of avoiding the allurements of one kind or another which are strewn along the pathway of even the most sheltered human beings.

Self-denial, self-control and self-discipline, these are the all-important factors for the salvation of the nervous child from its own tendencies as he grows up. Of himself he is prone to be more unstable in his conduct than a normal child, and therefore unless he has been stabilized by the exercise of many acts of self-denial and self-control under proper suggestion the result is likely to be serious.

IDLING A DIFFICULT ART FOR CHILDREN

Yet the child's life must not be a series of don'ts, and the wise parent or nurse, especially if at all experienced in the ways of children, knows that little ones must be doing

something—it is only grown-ups who learn to do nothing with equanimity—and that they will quite as a rule do right rather than wrong, provided only that the right thing to do is made easy for them and attractive, or is suggested to them as a novelty or diversion. Very often when a child is engaged in doing something that it is not desirable for it to do, or perhaps is even very undesirable, it is better to attract its attention to something else. It is far better to suggest that he should do something in place of his objectionable occupation than to tell him simply what he must not do. It is difficult for the child's mind to get away from what he has been doing, if nothing else is suggested to occupy him, and so he persists or goes back to what was forbidden, not from any real obstinacy, but from the fact that his mind refuses to be turned from an engaging interest to a blank of occupation which has no attraction. This is particularly true of nervous children. The rule is to keep them occupied, and when they get wrongly occupied by chance, to divert their attention to other things, but not to nag them. Nagging only increases their irritability, and the tendency of their nervous system to react more than it ought to. Nagging disturbs both parent and child.

THE FATHER'S EQUAL RESPONSIBILITY

Boys and particularly nervous boys always need the discipline of father as well as mother. Mother is likely to be too tender-hearted and the nervous child soon appreciates this and learns in many ways to take advantage of it. As the boy grows up mother should insist, if father, as is so often the case, neglects his duty in the matter, on his taking a proper part of the discipline, and he must not be allowed to shirk the duty just because he says that he does not care to be bothered or that he is tired from busi-

ness and that mother must assume this obligation. We all know the value of having someone else to refer the decision of unpleasant things to, the silent partner whose opinions must be consulted and on whom we can place some of the blame. If the father is really interested, this position of the power behind the mother instead of making him less loved by the children will make him more respected. The father can mean very much in the management of nervous children, and the mother should insist on his influence being used to the best advantage. Very often there are particular family traits emphasized in the children which the father or mother readily recognizes because of their association with their own families, and as the child is the offspring of two parents he should have the advantage of dual care, since each of his parents has a special experience to call upon.

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XI

NERVES AND THE SICK CHILD

"No 'shoulder-striker' hits out straighter than a child with its logic. Why, I can remember lying in my bed in the nursery and settling questions which all that I have heard since and got out of books has never been able to raise again."

OLIVER WENDELL HOLMES—*The Professor at the Breakfast Table.*

* * * *

"Imagination frames events unknown
In wild, fantastic shapes of hideous ruin,
And what it fears creates."

HANNAH MORE—*Belshazzar,* Pt. II.

* * * *

". . . . the childe is often brought to take most wholsom things by hiding them in such other as have a pleasant taste; which if one should begin to tell them the nature of *aloes* or *rhubarb* they should receive, woulde sooner take their phisicke at their eares than at their mouth. So is it in men (most of which are childish in the best things until they are cradled in their graves). . . ."

(SIR PHILIP SIDNEY—*Apologie for Poetrie*—1594).

NERVES AND THE SICK CHILD

Most sick children are nervous, and even in illnesses accompanied by only slight fever a very noticeable alteration in the personality takes place. The famous question, "are all fishermen liars, or do only liars fish?" is not any more logical than "are all nervous children sick, or do only sick children get nervous?" Of course all children are subject to illness, and illness acts more violently, especially in the infectious diseases, on the immature nervous machinery of the young child than on the normal adult; while in the case of the child already nervous, illness accompanied by fever may intensify these nervous symptoms and bring them to the fore in a manner sufficiently marked to obscure the real cause of the disease.

Fever is a disorder of the machinery which produces and distributes heat. This regulation of heat is quite dependent on automatic nervous control, and this kind of control is less developed in the child than it is in the adult. That is why a child and especially an infant will usually develop a higher temperature than a grown person, even when the causes of fever in each case are identical.

THE SPASMOPHILIC CHILD IN ILLNESS

An ordinary example of the reaction of a nervous child to illness is seen in those children who, when suffering from the congestion of the brain produced by even moderate fever or from the eruption of a tooth, proceed to have convulsions—the spasmophilic type of child. These children may be classed, potentially at least, as the nervous type. They are subject to very high temperatures, may have violent disturbances when erupting teeth

and are a constant source of apprehension to their parents. Any child, nervous or not, may have convulsions in exceedingly high fevers—but the spasmophilic or convulsive type of nervous child twitches and has spasms when the fever may be slight.

Usually the imaginative powers of the child are increased by fever. The phantasies which come into his consciousness are very real and sometimes very terrible. At best not able to reason with adult clearness, the real world and the imaginary merge until the little bewildered creature abandons all attempts at judgment and yields unrestrainedly to every emotional caprice. Even the sensations of heat, of cold, of pain, are intensified to an unusual degree, and the child reacts by crying violently at every attempt to do anything for him. Taste particularly becomes abnormal or absent; foods ordinarily taken with pleasure become abhorrent; the entire world of experiences becomes a jumbled dream in which everything is distorted and out of focus.

TEACHING THE CHILD TO FEAR THE DOCTOR

This may be the condition of affairs with even the average child. It is intensified in the nervous child. In the case of the child improperly trained and filled with fears of the dark and of bogies, whose little mind has been planted thickly with phobias of all kinds, the condition in illness becomes distressing to the last degree, and may be even dangerous to the child himself. This is especially the case in families where those in charge of the child have used the visit of the doctor as a threat of punishment. Many a nurse or mother has deliberately planted a fear of the doctor's visit in the mind of a well child, only to endure a scene of terror and pain in later days when it becomes necessary to have the child examined by

the physician. Seldom can a proper or satisfying examination be made of a child of this type. The condition of these little ones under such circumstances becomes truly pitiable; they endure paroxysms of the most abject terror and will fight to their last ounce of strength to resist the

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approaches of the unspeakable individual whom they have been taught to distrust and to fear. Obviously, when a careful examination is imperative, as in the taking of a throat culture, or in auscultation of the chest, the child is placed at a distinct disadvantage so far as his life and health are concerned. I have known of more than one child whose death was probably hastened through the wearing down of needed strength from continuous resistance to necessary treatment and examination.

Frequently when the child becomes extremely ill, men-

tal and muscular weakness supervene so that he can no longer fight the ministrations of the physician or nurse. The only consoling fact in the belligerent attitude of the nervous or spoiled child in illness is that such a reaction would not be possible if the child were in an extremity of weakness from the disease. It should not be forgotten, however, that such an attitude on the part of the child may hasten the progress of the disease toward the point of muscular and mental inanition.

ONE MOTHER'S METHOD

One intelligent mother, whom I knew, made it a practice to refer to the visit of the physician as an amusing and privileged experience, not necessarily connected with pain or illness. Her children were promised a visit from the physician as a reward for good behavior, and the physician's examination as a very amusing game. Playing doctor by the mother, looking at throats and tongues "to see if they were like the lion's mouth at the zoo," drumming on the chest and playing a tune, "hearing the telephone talk from the inside," these were occasionally played as a game for really good and well children. The result of this suggestion was most happy; the two little girls, aged three and five respectively, played their "doctor game" with huge delight even when quite ill. Once only, when I had left the room the younger little girl began to cry loudly, and I supposed that the scheme had failed to work. But the mother called to me, "Come back, doctor; Mary is crying because she thought you were through playing with her."

It is quite possible that this is an unusual instance, and yet this mother had grasped the important principle of positive suggestion to counteract the effect of fear on the child's personality during illness.

MISUSING THE WORDS "BRAVE" AND "HURT"

When a child visits the office of a physician or a dentist he is often buoyed up by promises of rewards or gifts to be given to him in case he does not cry. In other words, it has been suggested to him that he is about to pass through a very severe ordeal "like a man"—that he is to endure something that even "big people" dread. He imagines until the time comes that he may be able to do it. Then stark fear grips him and he bursts into tears. His parents cannot understand his behavior at all. They forget that their very efforts to deceive the child have fixed in his mind a fear of the physician or the dentist, and emphasized the fact of the interview as a painful and terrible ordeal. The visit to the office of the physician or the dentist should not be discussed pointedly, nor at all, except in the ordinary way. The word *hurt,* or the promise of reward for being brave, or good, should never be referred to. This will avert the danger of having the child associate her visit to the doctor's office with an idea of pain or discomfort.

Once a child has acquired this unreasonable terror, it is quite useless to reason with him. To stand around him, shouting to him "the doctor won't *hurt* you," will do no good whatever. The only possible course is to cut the interview as short as possible by getting it over with. Allow the nurse to hold the child very firmly and do what has to be done as quickly as possible. Argument only prolongs the period of fear. And the child will not be convinced.

THE CAUTIOUS APPROACH

The wise physician in his office, or when entering a child's room, will not approach or address the child directly. Instead he allows the child to discover him. He

does not offer the child toys or other objects. He may offer them to someone else in the room—the mother or the nurse—and presently a very strong instinct—though not as strong as fear—the instinct of curiosity— will come into play. If the child has not been frightened too much he will frequently become friendly with the physician by making the first advances. The so-called " bad " child, under such circumstances, is often a little creature whose mind has been filled by terrors by a misguided though well-meaning family's reiteration of sentences containing the word *hurt*. Sometimes the memory of a previous painful ordeal remains with a child for a long time. Young children who have had tonsils removed, or have had incision of the ear-drum, are very likely to remember their painful experiences and associate them with the visit of the physician—in fact with the very name " doctor." One mother tried to cure this phobia by telling her little girl in the presence of an embarrassed physician: " Listen, dear; that man who hurt you wasn't a doctor; he was a throat specialist. Doctors don't hurt little girls." But even this unconscious gem of humor did not avail to curb the little girl's dread.

It is not uncommon to have night terrors occur in nervous children for some time after they have been anæsthetized, or when they have been frightened by some surgical procedure involving pain.

INFECTIONS AND THE NERVOUS CHILD

Lobar pneumonia is a disease which is frequently accompanied by delirium in children, and in the nervous child invariably so. Frequently the delirium becomes almost maniacal in its intensity, but fortunately in chil-

dren recovery in this form of pneumonia is the rule rather than the exception.

It is a quite common misconception that the nervous constitution of itself predisposes an individual toward the various infectious diseases which involve the nervous system—tuberculosis, meningitis, cerebro-spinal meningitis, the more or less newly-described inflammation of the brain called "sleeping sickness," or its near relative, poliomyelitis, or infantile paralysis. These diseases are caused by bacteria, and bacteria may infect the individual of strong nerves as well as the weak. The nervous child may become more ill, once he acquires these diseases, than the normal child; but he does not acquire them any more readily. It is only toward the so-called functional nervous diseases that the nervous type of child is predisposed.

ST. VITUS'S DANCE

There are, of course, certain borderland diseases, such as chorea, or St. Vitus's dance, which have a large nervous element in their manifestations. True chorea occurs in the course of rheumatism, or infectious tonsillitis, and nearly always is accompanied by an inflammation of the heart. Some fever is usually present, and the child is in continuous motion, as her muscles contract involuntarily. Quiet and rest are indispensable in the treatment of this condition, and children already of a nervous type constitute the worst cases. But all involuntary jerking motions are not true chorea or St. Vitus's dance. Certain hysterical symptoms in very nervous children may resemble true chorea while none of the other symptoms which accompany the latter condition are present. These children should be treated as if they had real St. Vitus's dance; quiet and rest are invaluable aids toward recovery. Treat-

ment in a hospital room, away from usual surroundings, is frequently quite effective. Absence from parents and relatives, so far from being a calamity, seems beneficial in this disease.

THE ASTHMATIC CHILD

Asthma is another disease in which the nervous complex plays a large and important part. The form of asthma seen most frequently in children is that which is due to the sensitization of the child to some form of organic dust, just as hay fever subjects are sensitized to inhalation of the pollen of certain weeds. Sometimes the attack is brought on by inhaling pollen of some sort, or hay dust, or the dust from horsehair, or dog hair or cat hair, or from feather pillows, particularly made of goose feathers. Especially if a slight catarrh of the throat is already present, an attack of asthma may occur in a sensitized individual with great suddenness when the specific dust is inhaled. An example is reported of a little girl who never had asthma when her father remained away from home for considerable periods, but suffered frequent attacks when he returned. Her father smoked a great many cigarettes, which he habitually carried in his pockets in a paper carton. Consequently he constantly exhaled the dust of tobacco and other things found in cigarettes. A test showed that his daughter was sensitized to this form of dust, and that she suffered from asthma whenever she breathed it. Again, a little boy who got asthma whenever he attended a motion picture performance was found to be sensitized to rice. A number of the lady patrons of the theatre evidently used rice powder as a cosmetic, and electric fans distributed it in the air of the auditorium.

Many, many cases of asthma are due to the use of pillows filled with goose feathers.

THE NERVOUS ELEMENT IN ASTHMA

But while nervousness does not cause asthma, the individual who becomes asthmatic usually also becomes neurotic and afraid of things. The fear of not getting enough air to breathe is very common. Especially at night, the little sufferer may waken, and being short of breath and in the dark, may suffer from horrible forebodings. It is well to always keep a night light burning near an asthmatic child, and also have books or toys close at hand. If an attack occurs, let the light be turned on, let every possible reassurance be given, and apply treatment as has been suggested by the physician. Try to inspire confidence in the little patient, if the attack is not really bad engage him in games or reading, and this will help to relieve some of the distress at least. It will be found nearly always that asthmatics are worse in the dark than during the daytime.

INSOMNIA IN THE HIGH-STRUNG CHILD

Frequently the older child who is somewhat nervous or "high-strung" suffers from insomnia. Whenever he has fever from any cause, no matter what other symptoms are present, a warm bath is usually advisable, and frequently will serve to make the child sleepy. The very excitable or spasmophilic child, who has convulsions when cutting a tooth, or when only a slight amount of fever is present, is a source of unlimited worry to his parents. A commonly-held view is that such children should be placed in a very hot bath at once. Often, when these attacks are due to excessively high fever, very hot bathing is not at

all desirable. And among excitable people the danger of scalding the child is not a negligible one. Whatever the cause of the convulsions may be, a warm bath, not a hot bath, is to be recommended. The child may be placed in a tub, with the body submerged, or an infant may be wrapped up in Turkish towels wrung out in warm water. Cold cloths should be applied to the head, at the same time. This bathing may continue for ten or fifteen minutes, or even longer. The child should then be loosely wrapped in a blanket, and the bowels emptied by a soapsuds enema. Meanwhile, the physician will have arrived, and will be able to interpret the meaning of the attack.

BAD HABITS IN ILLNESS

Frequently it is found that a child, cured of some nervous habit, after considerable effort and thought, returns to it when he becomes ill, partly because of lessened discipline and largely because mental values are disturbed by the illness. The question as to whether or not the child should be allowed to reacquire his bad habit, is an important one. Certainly he should not be *encouraged,* for instance, to suck his thumb, because of the mother's or nurse's belief that the practice comforts him, although just as certainly strong repressive measures are not to be taken during illness. It would be well to attempt to maintain some order and discipline even in the sick room. Otherwise a hard road has to be traveled by the mother and the nurse when the child has recovered. Some habits will disappear with recovery just as they appeared in illness, without any special effort at retraining. Anxiety or irritation should never be displayed in attempting to put a sick child in order.

A VEXED QUESTION

The question as to whether the mother should nurse her own child in illness is one which has to be decided sometimes by the family, sometimes by the physician. Unquestionably the nursing of the spoiled or nervous child by his mother may sometimes retard his recovery through the very emotional crises which he undergoes many times an hour in her presence. A good and well-trained nurse, who understands children, and who is more or less of a stranger in the household, usually manages to carry out the nursing routine even in the child of tender years without any great difficulty. The presence of the mother together with the trained nurse, especially when caring for ill children of from two to five years of age, frequently makes the nurse's task difficult. The child in such circumstances will cling to the mother, refuse the offices of the nurse, and cry much more freely than if either one or the other were absent. The child is a very sensitive barometer of the feelings of those about him, and parents with ill children should mask their real feelings and appear as cheerful and as happy as possible in the sick room. To appear distressed and downcast and to expatiate on the sufferings of the child has the worst possible influence on his mental processes. Not only the parents, but the nurse, too, should avoid speaking in his presence of how sick the child is, of the presence or absence of pain, of the height of the fever or of other suggestive subjects—this refers, of course, to the child who is over two years of age.

THE SUGGESTION OF CHEERFULNESS

Children take a morbid interest in their symptoms even at a very early age, and counter-suggestion along lines of cheerfulness and self-confidence are especially val-

uable during the first years of life. To state in the presence of an older child that he has any grave disease, or has a weak heart, or is not likely to recover, is not a common practice; but I have seen it occur many times when anxious parents proceeded to tell the history of a child who is younger than the school age. Undoubtedly the poor little sufferers understand something of the conversation, and who can tell what hours or even years of despondency and mental suffering may not have resulted from such thoughtlessness?

The duty of the parent in making his child's life happy is acknowledged by all who deserve the parental name. That in the sick room no small part toward this obligation may be accomplished by setting an example of steadfastness and courage, and cheerfulness, especially during pain and in adversity, is a truth which many of us should not only learn but should also put into practice if we would give to our children what is only their birthright.

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XII

HABITS, GOOD AND BAD

"The child's religion depends on the way in which its mother and its father have lived, and not in the way in which they have spoken. The inmost tone of their life is precisely what reaches their child, who finds no more than comedy or empty thunder in their maxims, remonstrances and punishments. . . . A child sees what we are, through all the fictions of what we would be."

HENRY FREDERIC AMIEL in *Fragments of an Intimate Diary.*

* * * *

"Habit with him was all the test of truth.
'It must be right; I've done it from my youth.'"

CRABBE—*The Borough,* Letter III.

* * * *

"How use doth breed a habit in a man!"

SHAKESPEARE—*Two Gentlemen of Verona.* Act V, Sc. 4, L. 1.

HABITS, GOOD AND BAD

"Childhood," said a French philosopher, "is the sleep of reason." Proverb makers in every land and in every time have delighted in telling us that "the child is the father of the man," or that "as the twig is bent so will the tree be inclined," that we must "bring up the child in the way he should go" or that we may "spare the rod and spoil the child." From the earliest times, the need of training the child so that he may develop proper habits has been spoken of by poets and philosophers. *The Instruction of Ptah Hotep,* written in Egypt a longer time before King Solomon's day than King Solomon lived before us, and said to be the oldest book in the world, was a manual intended for the instruction and training of noble youth in habits of virtue. On the continent of Europe and in England the first books on the health-care of the child did not appear until the sixteenth century, but long before that time manuals of conduct for older children were written to be used by those who tutored young men in knightly graces at the great houses. From the fourteenth century onward we find works such as *The Babees Booke, The Lyttle Children's Lyttle Book* and similar volumes in English, written in rhymes and intended to be memorized by the "cadets" in the houses of noblemen. These volumes were not intended for children; the "babees" of that day were twelve to sixteen years of age. These were books of etiquette for youth more than anything else. Nowadays we begin training somewhat earlier.

INSTINCTIVE HABITS

The newborn infant has no past and no future because he has no memories. He is born with certain habits such as sucking, swallowing or crying, which are instinctive

acts, and not accomplishments in the sense that they do not have to be compared with previous experiences for their production and repetition. But the development of memory, of the power of attention, of will and of judgment, are all concerned in the formation of those necessary habits which are gradually established as the child adapts himself to life as an independent individual. There is nothing new in the idea that it is wise for parents to teach children how to live in the world, although our ancestors may not have always gone about that teaching in the proper manner.

Possibly, like the peoples of times past, we have been too much inclined to think that the actual mental training of the child is something to be considered seriously when he reaches the age of five or six—the age to be "sent to school." We forget that from the first day of his birth the child is trying to educate himself by experiencing sensations of light and sound and taste and touch and muscular movement, storing these up and comparing them with other sensations of a like or dissimilar nature. The infant acquires knowledge at a tremendous rate, and he automatically takes his education from his surroundings, adapting himself with an almost miraculous mental progression and evolution to the conditions that surround him.

The responsibility of the parents, and especially of the mother, in the first year of life is at the very least that of realizing that the child is the best judge of what he can or cannot do. This means that parents should refrain from over-stimulating and over-tiring an already heavily taxed little brain, and should never attempt to teach the very young child the accomplishments of more mature children. Later, the indication for a positive system of

mental training is as real as it was unnecessary in the earlier life of the baby.

THE OVER-TENDER PARENT

In the course of months the infant has developed enough memory associations and enough will to be able to assert himself in a limited way, and the parent from misguided affection is often tempted at this time to evade the responsibility of a not too agreeable task which requires both patience and intelligence—the task of guiding these wilful impulses in the direction most favorable to the child's development. Heller, who is an authority on child training, in speaking of this, says very truly: "That inordinate love which is bestowed on many children, guarding them from all things disagreeable and enabling them to live for their own pleasure alone, which confers privileges but imposes no obligations, is followed by serious results. It restrains progress instead of promoting it, and we must view with apprehension the ultimate result of bringing up a generation with such over-tenderness and such extreme consideration. These parents, who appear to be so interested in their children by such standards, or lack of standards, directly cultivate abnormalities in the young of their households. Remedial pedagogy as a result must not only fulfil its real purpose of curing abnormally predisposed children by educational influences, but it has laid upon it the additional duty of neutralizing by proper educational methods the faults of previous bad training."

It is to avoid the necessity in later years of uprooting weeds in the garden of the child's mind, that training in habit formation is so necessary even in these very early months of life. As soon as the child begins to have memory he begins to form habits. It is a little more, but not

very much more, difficult to form good habits for an infant than to allow him, or teach him, to form bad ones for himself. We all know that "grown-up" people, in learning a sport involving muscular action, as skating, or golf, or dancing, find it difficult at first to bring the proper muscles into play with rapidity and grace. After repeated attempts, it becomes easier, until finally these acts may be more or less dextrously performed with no special thought of them—they become automatic or habitual. This takes place because what the psychologists call association centres are formed in the brain and spinal cord for the easier performance of these special movements. In the child new centres are constantly forming and constantly breaking down as they are no longer required. But some of these centres persist and develop more and more as the days go by, provided the acts that form them are repeated. These are the switchboards of our habits, and though they have no actual substance and are made of invisible and intangible thoughts, they may nevertheless last a lifetime and prove stronger than cords of steel in extending or limiting our life careers.

STANDING, WALKING, EATING

In the nervous infant the formation of normal habits may be irregular, or less easy of accomplishment than is the case with the more placid baby. Some habitual acts such as standing erect, or the complicated performance of walking, which involves not only locomotion but also balance, may be acquired without any special care on the part of parents or caretakers. These may be called positive or active habits in contradistinction to the negative or inhibitory habits, which are more difficult to acquire—such as the act of controlling the impulse to empty the bladder and

the rectum, and also the habit of control of the ability to initiate and to check defecation or urination at proper and suitable times. These are "conditional reflexes." The habit of chewing and swallowing solid foods rather than sucking liquid ones, which begins to be established from the sixth to the twelfth month, is one which can be automatically acquired but is more easily formed with assistance and instruction.

The mentally-retarded child is slow to learn the active habits, even the act of chewing and swallowing solid foods and the act of standing or even sitting erect. The negative or inhibitory habits, bladder and bowel control especially, are still more difficult of acquirement by this type of individual and may come later in life or not at all, depending on the degree of educatability of the child. Perfectly normal children, however, may also be somewhat slow in acquiring this control, and lack of control is of itself no indication of limited mental ability.

The education of the normal child in standing up requires nothing more than the provision of a suitable means for the incipient toddler to pull or hold himself erect as soon as the will to do so manifests itself. The small wheeled cribs with wire gauze walls, or the play fences, where the child may move about on a more or less padded floor and enjoy liberty without license, are examples of the kind of thing the child can utilize for this purpose. When the fence is built of very light wood the child may find himself able to capsize his prison in attempting to stand, and enjoy an excursion into some long-desired nooks. The fence should be heavy enough to prevent this, and the introduction of additional rounded cross-bars in both the fence and the "coop" will give a lower reach and easier leverage to the exercise of the erector muscles.

TEACHING BLADDER CONTROL

Bladder control teaching should begin when the infant is a couple of months old. At this time, after each feeding, the diaper should be removed and a small, round, cold vessel placed against the baby's buttocks for a half minute or so. Soon the child will begin to associate the emptying of the bladder with one of the earliest acts that he thinks about—feeding, and involuntary urination at other times will become less and less frequent. The early abandonment of napkins for drawers will also help in establishing the habit of bladder control. When the child is old enough to be placed on a chair, usually after the sixth month, this should replace the use of the vessel. Bowel function should be encouraged at two different periods of the day, choosing a certain hour of the morning and a certain hour of the evening. Gentle pressure over the left lower corner of the abdomen at this time may establish the voluntary contraction of the abdominal muscles necessary to cause the bowels to empty themselves. If constipation is present in the early months, it may sometimes be found necessary at times to introduce into the rectum a small pencil-shaped suppository of soap at that particular morning sitting which has been selected as the proper time for a bowel movement, and at no other time. Giving the child water in abundance between feedings and a diet containing residual material will also help to prevent early constipation. The use of suppositories and similar stimulants to emptying the rectum is by no means to be encouraged, for if they are employed daily the child may develop a habit of waiting for their stimulating effect before attempting to voluntarily empty his intestines.

The habitual use of rubber diaper protectors is also something to be protested against, not only from their unhygienic aspect, but also because of their effect on the

child's development of habits. Since these articles are used for the purpose of preventing the child from soiling bedding, or the floor, or the carpet, and this is accomplished at the expense of the mother or attendant's knowledge of just when urination or defecation has taken place, it must follow that the child soon becomes accustomed to having wet things about him, and will eventually come to think that this condition is as it should be. The appreciation of dry and comfortable clothing has an important part in the education of the child's habits of cleanliness. Most of all, let the nurse and mother be careful not to talk too much to the child of tender years about the need of a bowel movement, or exhibit anxiety or vexation when one does not occur. The tendency to negativism—to do the opposite—may be developed by unwise urging.

WETTING IN OLDER CHILDREN

With the older child who persists in bed-wetting, various expedients have been tried. Every physician is besought by mothers to cure the "weak bladder" of one or more of her children. And yet bed-wetting in adult life is practically unknown. I personally know of a young woman aged seventeen, whose mother consulted me in great distress, saying her daughter was engaged to be married, that she had the habit of bed-wetting, and that the mother, who had tried every possible medicine and treatment for her, was dreading and expecting humiliation and unhappiness for the young woman. I told the mother that she should not be anxious, and above all not to manifest any anxiety to her daughter, and that it was fairly certain that the young woman would cure herself once she really was obliged to try. The prediction was true; improper training and mental indolence gave way to a real attempt at self-control, and a complete cure was effected.

Various forms of treatment have been suggested for this condition, including punishment, reward, shame, limitation of fluids at night, limitation of sugar, etc. As to corporal punishment, it is not only wrong but may be distinctly harmful. Clothing a boy in a plaid skirt to shame him before comrades is another time-honored remedy. It is usually not effective. Bed-wetting often occurs when the child is in a semi-dream state, between waking and sleeping. As we all know, everyday conditions or everyday reasons do not prevail in dreams. It also is doubtful whether marked limitation of fluid will have a good effect, since if the fluid is too limited the urinary solids will be increased and a too concentrated and irritating urine will result. The checking of excessive fluid intake, as in the case of children who drink very large amounts of milk in the evening, is, of course, proper and helpful.

Scolding and punishing, especially in the nervous child, will only fix the misdeed more firmly in the child's mind, and fear that the accident may happen may cause its occurrence, followed by a paroxysm of shame and grief that cannot but be harmful. To explain simply that it is not nice to wet the bed, and that therefore mother will expect her little girl or boy to remember not to do it, and to do this without stress or anxiety, will be enough in the way of a reminder, especially if this be given just before the child falls asleep. Taking the young child up to urinate a couple of hours after he has been put to bed is helpful. But the most useful and logical procedure, especially for the child over three years of age, is the "bathroom drill." This consists of taking the child to the toilet at a certain period of the day, every day, causing him to begin urinating and then at a word of command teaching him to stop. This accomplishes two things; it exercises the muscle which cuts off the flow of urine from the bladder, and

what is more important, it makes the child *conscious* that he can, if he wills it, check his urinary flow. This knowledge soon becomes effective in automatic control.

As in the case of all other nervous habits, it is important for the mother and the father to manifest no special anxiety or distress at the occurrence of the involuntary act in the child. It is a notorious fact that children past the age of infancy sent to hospitals for observation regarding involuntary urination or defecation will frequently not show any symptoms of the condition while there. Some psychologists explain this by saying that when the child is placed in an environment where everyone expects him to do the objectionable thing, the tendency existing in the child to do the opposite to what is suggested results in a symptomatic cure. But whatever the real explanation may be, the fact is true. That a changed environment itself does not produce this result seems well proven since, according to Cameron, some of these very children who behaved well in the hospital had been obliged to stop visiting at the homes of friends because of the embarrassment caused by this habit persisting even when they were away from home and in entirely strange surroundings. It is of paramount importance in treating this, or any other nervous habit, not to betray anxiety or distress at any stage of the treatment.

The nervous disorders concerned with sleep, as well as the nervous habits connected with feeding, have been spoken of in another chapter.

THUMB-SUCKING AND THE LIKE

Related to feeding are certain objectionable habits such as thumb-sucking, air-swallowing and dirt-eating, and nervous vomiting.

Thumb-sucking occurs to a greater or lesser degree

among all infants at some time or another. It need not be considered an abnormal habit unless it is practiced regularly, or unless it persists in the child over a year old. The habit often begins when the first teeth appear, but in the most marked cases may be found in the first month or so of life. This practice favors the swallowing of air, and its effect in altering the shape of the face and the teeth, narrowing the vault of the palate and causing adenoid tissue to seriously impede nasal breathing, has been written about very extensively in recent years. The use of rubber pacifiers, or the practice of allowing the child to continue to suck on a nipple attached to an empty bottle are, of course, even more reprehensible and injurious to the infant than thumb-sucking. A few children acquire the habit of sucking the lower lip—and this is often a more difficult habit to get rid of than thumb-sucking.

It is certain that corporal punishment, or the practice of smearing the fingers with bitter substances or tying rags around the thumbs, are not very effectual remedies, and may indeed intensify the act by focusing the child's attention to it. If the habit is just beginning, as in the case of young infants, the covering of the hands with aluminum balls attached to the sleeves, which allow free play to the hands and fingers, and yet do not allow the latter to be placed in the mouth, sometimes serves to cure the tendency. These aluminum gloves were designed to be used to prevent scratching of the skin in the case of infants suffering from eczema and other itching skin diseases, and may be purchased in any surgical supply store.

In older children this expedient is useless, and may be even harmful. The older child should be told not to suck his thumb and fingers, but should not be nagged or worried about it. Outdoor life and exercise and association with normal children will usually effect a cure. A most

obstinate case in a girl of ten, in my own experience, who sucked her fingers till they became deformed and ulcerated, and twisted her ear until it was distorted, was cured by a sojourn in a summer camp under a strict regimen of play and work. She had been a much-pampered youngster; her parents had offered her all sorts of gifts in order to induce her to give up the habit, but without success. At the camp she had no time in the day and was too tired at night to practice it—and a cure was the result.

Air-swallowing often occurs in the nervous infant, who gulps down air before going to sleep, and then eructates it with a loud noise. It is a symptom of a nervous constitution, but usually passes away as the child grows older, especially if the habit is not made much of.

Dirt-eating, the habit of picking out pieces of plaster from the wall, or eating the fuzz of blankets, is found very frequently in institutional children who are malnourished, but may be seen in otherwise normal babies in private homes. The dried secretion from the nostrils is sometimes eaten by young children. Often even more disgusting excreta are eaten by babies. The mother is always much distressed by such occurrences. In the very young such practices have no special significance, but their occurrence in young adults would deserve to be closely investigated. To cure dirt-eating it is only necessary to remove the child from the vicinity where he can find the strange food. This tendency rarely lasts very long.

THE NERVOUS VOMITING HABIT

Nervous vomiting or hysterical vomiting may occur in the child who has numerous food dislikes, and who imagines things about food. It sometimes happens that a neurotic child will take a dislike to egg because of the glairy character of the white, or to thick sauces because of some

physical reason or some memory association based on the resemblance of the food to something which excites disgust. This type of child finds it very easy to become nauseated and to excite vomiting by simply seeing, or thinking about, disliked foods. After a while vomiting may be excited by any discussion regarding food, or any unpleasant scene in which a disliked food is offered. The mother frequently brings the child to the physician, offering a pitifully inadequate list of foods, consisting mostly of sweets and a meat or two, as the only things which the child can eat, and says: "If I give her milk, or bread, she will vomit immediately." The precocious, very thin little creature accompanying her mother may even proudly verify this statement. It is true that chronic indigestion does occur in young children, and is sometimes accompanied by vomiting after feeding, yet the characteristic mucus type of vomitus, the history of bad food habits, the dilated stomach and many other signs, easily enable a careful physician to tell the difference between a little hysterical fraud and a real sufferer.

The treatment of this vomiting is, of course, the overcoming of the negativism of the child. A change of surroundings, outdoor amusements, the encouragement of play and the social impulse, and the assumption of a total indifference for a limited time at least to what the child eats or does not eat, will undoubtedly help to establish normal food habits.

Cyclic, or periodic vomiting, which occurs in young children, is quite another matter. It is distinctly a nervous disease, frequently of hereditary origin, and may be superinduced through dietetic errors even of slight degree. It will be found frequently that one or the other of the parents or grandparents of such a child is subject to periodic headaches, or migraine. Children who have this

vomiting in childhood also have headache, but may not complain of it especially, nor does it appear to be so violent as in the adult. The services of a physician should always be secured for violent and persistent vomiting of any kind. The sufferer should be placed in a darkened, quiet room, the bowels emptied by an enema of soapsuds, several teaspoonful doses of milk of magnesia given at half-hour intervals and nothing else by mouth excepting an occasional piece of crushed ice.

Careful supervision of the diet and the prevention of constipation may serve to increase the length of the intervals between attacks.

OTHER OBJECTIONABLE HABITS

Masturbation in boys, or thigh rubbing in little girls, is a habit which is not uncommon and which may be the cause of much mental anxiety on the part of parents, especially the mother. These habits usually have their beginning when the child is still an infant, and occur when the little boy or girl is half asleep. In the girl, and sometimes in the boy, friction is produced on the genitalia by rubbing the crossed legs together. This act has no sexual significance to the young child and means only a pleasurable sensation with no conception of wrong-doing of any kind. Its practice is not uncommon and not usually to be worried about. A great deal of wrong and harmful literature has alarmed parents about this infantile habit to an unnecessary and dangerous degree. No greater mistake can be made than to fix the memory of the act on the little one's mind by punishment, or by speaking to a child of two or three years of age of the sin of doing such a thing. It is enough to have the child's bed not too soft, to place his hands folded on the pillow near him, or straighten his limbs gently if the legs are volun-

tarily crossed. Toys near the pillow to amuse the child when he awakens will also help very much. In the older child there is little chance of its occurring in the daytime if healthy play with other children is encouraged, especially that involving physical exertion—roller-skating, ball-catching, wagon-coasting, Irish mail, etc. Usually the undesirable habit passes away in infants, provided the child's attention is not too strongly directed toward it by talking and " don't "ing and punishing.

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XIII

SOME ABNORMAL HABITS OF CHILDHOOD

"Small habits, well pursued betimes,
May reach the dignity of crimes."

HANNAH MORE—*Florio:* Pt. I.

* * * *

"Ill habits gather by unseen degrees
As brooks make rivers, rivers run to seas."

OVID—*Metamorphoses:* Bk. XV. L, 155. Translated by Dryden.

SOME ABNORMAL HABITS OF CHILDHOOD

A number of habits which nervous children are rather prone to acquire may persist into later life and result in serious disturbance of some of the ordinary activities of life. Most of these are really habits; that is, tendencies to do certain things consequent upon frequent repetition of similar acts. As a rule there is only one way to counteract such tendencies, and that is by the formation of contrary habits. This is not always an easy matter. Quite the contrary, it may prove very difficult for, as was suggested by Professor William James, a habit seems, as it were, to form a groove in the nervous system down which flow very readily the nerve impulses which bring about the activity in question. It is extremely important, therefore, to guard against the formation of such habits. Nervous children are much more likely to form unfortunate habits than the normal child, and when the first sign of a habit shows itself it must be taken in hand in order to prevent the act from becoming chronic. The longer it has existed the harder it is to break. Discipline, gentle, but firm, is required to break habits. Also, very often, similar discipline must be enforced to prevent their formation, and the first tendencies to repeat objectionable acts must be carefully watched for. The old Latin proverb ran "prevent beginnings, for later the remedies required are not so effective."

HABITS OF SPEECH

Some of the earliest nervous habits come in connection with speech. Baby talk, that is, the use of words in a sort of pigeon English with consonants misplaced and

syllables clipped, is probably the commonest of these. Some baby talk is almost inevitable, because of the as yet undeveloped organs, and imperfect training of the child in speech. Not a little of it, however, and especially its persistence, is due to neglect of the parents to have the child hear the proper pronunciation at all times, and thus gradually come to copy what is best. Baby talk is often looked upon as very "cute," and parents and nurses often laugh at it, and thus attract the child's attention to it and emphasize it, so that the habit of it is retained long beyond the period when it would, under ordinary circumstances, disappear. Sometimes they go so far as to repeat the imperfect expressions themselves, or indeed to make those the ordinary custom of the household, especially in the baby's presence. This leads to the maintenance of this mode of speech, and a habit is formed that becomes difficult to break. These infantile mispronunciations may endure for years, or at least there may be a tendency to revert to them, and sometimes even decades later in public speaking, especially when the speaker is under emotional stress, they may influence the enunciation.

The treatment for the condition is to avoid encouragement of mispronunciations and keep as far as possible from noticing them, and especially noticing them in such a way as may impress the child. The positive thing to do is to have the child hear the proper pronunciation just as often as possible, and then he will gradually pick up that pronunciation for himself. The child is eminently imitative and can be depended on to follow good example, if only that example is set.

It is of the greatest importance that those in intimate contact with the child should talk just as good English as possible. The same thing is true for any other language that may be spoken in the child's presence with the idea

of laying a foundation for the readier knowledge of language in later life. In our day, unfortunately, it is not always easy to secure this, since our children's nurses are likely to be foreigners who have come from the lower classes, are ignorant, as a rule, and talk even their own language incorrectly. Parents themselves should associate more with their children than is the custom in our time, if for no other reason than to produce the good effect of such companionship upon correct speech. Possibly to secure this would revolutionize so many household habits in our day that it would seem impossible to most people. It must not be forgotten, however, that home education is extremely important. Not a little of the failure of education, of which we hear so much in our day, is due to the lack of proper training in the home during the very early and extremely impressionable years that follow infancy. Infancy, according to the etymology of the word, really means the non-speaking period of life.

HOW THE INFANT LEARNS TO TALK

Learning to talk is an exceedingly difficult attainment, as any adult who has ever tried to learn a foreign language knows very well. Children may be depended on to acquire speech for themselves very well if only they are set a good example in the matter. The nervous child, because of his tendency to the production of habits more easily than the normal child, and because of his readier reaction to its environment and greater openness to suggestion, is much more likely to be affected unfavorably by unfortunate conditions that it perceives in those around it than is the normal child. Hence the necessity for greater care for such children and the need of their being brought in contact just as far as possible only with those who will affect them favorably.

Occasionally the occurrence of some very severe infectious disease, as for instance epidemic cerebro-spinal meningitis or even some chronic disease of nutrition during the second year of life, may very seriously disturb the acquisition of speech and may even delay the child so much in forming correct habits of speech as to make it almost impossible for any but those familiar with his mode of pronunciation to make out what he says. Sometimes parents become very much discouraged after several years pass and the child is still unable to speak quite plainly and fear that this is to continue through life. It is surprising, however, if the intelligence is unimpaired by the illness, how much delay there may be in the acquirement of clear speaking by such children in many instances where later complete recovery has taken place. I have seen a number of children whose parents were almost in despair over their imperfection of speech, all of whom, when the mentality was good, have learned to talk without noticeable defects. In one striking case, at the age of seven, after a very severe attack of cerebro-spinal meningitis, toward the end of the second year, the child was still very defective in speech, and yet he has grown up to be an excellent talker who makes public addresses on many occasions and is well known for the smoothness and ease of his public speaking.

STUTTERING AND STAMMERING

The most serious form of speech disturbance is what is called stuttering or stammering, though stuttering is now usually limited to the speech difficulty which prevents certain nervous persons from beginning to talk, while stammering is used for defects of speech and incapability of pronouncing certain consonants. Most foreigners stammer over the pronunciation of special combinations

of letters, if they have learned the language when they were adults. Children, as a result of hearing defective speech around them, may very well suffer from a similar condition. This is not difficult of correction if the children are not mentally deficient in any way. Stuttering is entirely another matter, and may give rise to serious difficulty of speech and may even prove distinctly hampering for success in life. The stuttering of the very young can usually be overcome by a little careful training, if it is taken in hand early and patiently by a competent teacher. Quite needless to say, stuttering may be such a serious handicap in life that it is well worth while seeing to its correction at once. There are a number of charlatans who pretend to have methods of curing stuttering, and these should be avoided rather carefully, for they often do much more harm than good, mainly by delaying proper treatment. Only someone who is recommended by a competent physician should be consulted in the matter.

WHY WOMEN STUTTER LESS THAN MEN

Perhaps the most interesting thing about stuttering is that it is ever so much rarer in females than it is in males. Something less than one-fourth as many girls suffer from it as boys, and this is true for all periods of life. Women are usually more bashful and self-conscious than men, but this rarely goes to the extent of disturbing their speech faculties. Ungallant observers have suggested that the sex quality of ready speech is too profoundly seated in nature to be disturbed by mere bashfulness, but there seems to be no doubt that the breathing of women, which is usually of the thoracic type, has much to do with the difference between them and men in the matter of speech defects.

When stuttering occurs in girls the defect is much less

tractable and is usually dependent on a more serious disturbance of the psychic or of the central nervous system. The prospect for the ultimate cure of stuttering in girls is not so good as in boys, but remarkable results are sometimes effected by mental treatment of the self-consciousness which causes the speech defect.

Not infrequently a certain amount of stuttering develops at puberty when the voice changes, partly due to the inability of muscles and nerves to coördinate so exactly as before in the rapidly-enlarging vocal cords and larynx, and also partly to that greatly increased self-consciousness, amounting almost to painful bashfulness, which may develop in boys about this time. Breathing exercises, and especially slow expiration, is an excellent thing in these cases, and distracts their attention from themselves and their speech.

The chest has usually developed rather rapidly at this period and the muscles have to some extent lost their wonted control over the act of respiration, and it will be found on careful observation that the breathing is particularly superficial, and that the descent of the diaphragm is quite limited, and that the use of this important muscle of respiration requires practiced exercise in order that it may be controlled properly.

SOME PRINCIPLES OF THE TREATMENT OF STUTTERING

Over-attention to speech has probably more to do with the production of stuttering than almost anything else. It is necessary, then, to divert the mind from concentration of attention on the act of speech. The attention must be centred on something besides speech itself. This is the important element in any method of treating stuttering. If the sufferer centres his attention on the act of speaking nothing will save him from becoming tangled

in the efforts that he makes to coördinate the complex movements of his speech machinery. But if he could only forget about "bossing" the movements of his talking machinery, allow them to proceed automatically, as do the rest of mankind, there would be no difficulty at all. Washington Irving, so ready with the pen, could not utter two successive sentences at a banquet without having to sit down, with utterance absolutely inhibited from excitement. Expression, thought, utterance, all may be inhibited by overconscious attention, which may also disturb other complex activities.

The most interesting methods of treatment for stuttering are those which involve the use of various artificial hindrances to speech. Any such additional obstacle would seem to be least likely to make it possible for a person already laboring under speech difficulties to talk with more ease. The secret is, of course, that the added impediments so distract the attention of the patient and occupy his mind that he is kept from paying such conscious attention to the muscular coördination necessary for speech, and thus is enabled to accomplish it without difficulty. It is because of over-attention to himself that the disturbance occurs. These obstacle methods for the relief of stuttering developed very early in history. We all know the tradition of Demosthenes overcoming his impediment by keeping pebbles in his mouth when he practised public speaking. One of the most earnest advocates of a similar method, who had himself suffered very seriously from stuttering, was the Rev. Charles Kingsley, one of the most distinguished of English literary men. He cured himself, or at least greatly relieved his symptoms, by keeping a disk of cork fast between his back teeth while talking.

There have been many other curious suggestions for the cure of stuttering. What was known as the American method had great vogue in the early part of the nineteenth century. It was probably invented by Yeats of New York, though it came to be known as the Leigh method. Yeats, himself a physician, seemed to fear that he might fall into professional disrepute if he advertised the method in any way, so he had his daughter's governess, a Mrs. Leigh, open an institute for the cure of stuttering in which this method was practiced and it proved to be very successful. The entire secret of it was to have the patient raise the tip of the tongue to the palate and hold it there while speaking.

Another mode of treatment that attracted considerable attention consisted mainly of just exactly the opposite manœuvre, that is, keeping the tongue as far as possible firmly placed on the floor of the mouth during speech. It is evident that neither of these suggestions does anything more than occupy the patient's attention with an additional activity, so that his speech function may be allowed to proceed automatically of itself, as it will, if not disturbed by attention to it, and by conscious attempts to regulate the various activities of it. Instruments were invented to help the patients to secure various positions of the tongue. Itard, for instance, during the second decade of the nineteenth century, invented a golden or ivory fork to be placed beneath the tongue, so as to support it.

ATTEMPTS TO ABOLISH OVER-CONSCIOUSNESS

After the various methods of managing the tongue, the most pupular curative manœuvre has been that of regulating the breathing. During the nineteenth century there

were at least a dozen different methods, all of which had a number of reported successes, of treating stuttering by means of breathing exercises.

Very simple methods of diverting the attention from speech are quite sufficient in many cases to bring improvement. For instance, the insertion of extra letters that are themselves easy to say between words, or preceding consonants that are hard to utter, has been a favorite method among the specialists in stuttering. Johannes Müller, as I said, suggested an *e*. Others have suggested an *n*. Occasionally stutterers themselves form the habit of using an *m* or an *a*, and find that it aids their facility in uttering difficult sounds over which they would otherwise halt and stutter. A combination of these methods, as, for instance, an *e* between all words and the placing of an easy *n* before the most difficult sounds, has been repeatedly revived as an infallible method of treatment.

All this serves to show that in patients whose functions are being interfered with by over-attention, diversion of mind must be the main remedy. If this can be secured, the function they are disturbing will be allowed to proceed unhampered. What will prove effective for one patient, however, may fail with another. After the patient gets used to a particular form of diversion another must be tried. Simple methods are sometimes sufficient to secure good results. The one thing is not to be discouraged and to proceed from one effort to another, satisfied even if relief is obtained for a while, for after relapse another method of treatment may always be tried.

CERTAIN OFFENSIVE HABITS

It is astonishing what habits children may acquire during their early years. I am not surprised at anything that I hear any more in this regard. I have seen children

do almost everything that would apparently not be expected of them. I have actually seen one female child that liked to dabble in urine or rub itself when it was wet and then put its finger in its mouth. Eating dried nasal secretion is not unusual. Most of the children that I have seen who have had such habits have not been feeble-minded, and some of them have been very intelligent. Almost needless to say, parents were very much shocked over the actions of these children and could scarcely understand them. The one thing to do, however, is not to pay too much attention to them and to take such simple precautions as will prevent certain sensations from calling attention to the parts and tempting the fingers of the child in that direction. When, for instance, the nasal secretion is not allowed to become hardened and conditions in the nose are improved by applications of albolene, when the beginnings of the irritative conditions around the anus and the urinary orifices are treated by simple applications of oxide of zinc, or other suitable ointments, the habits will usually be broken. Children as a rule do not like the greasy tastes associated with these remedies. That is not the main reason for using them, but rather the fact that the irritative condition must be remedied.

Nervous children particularly are likely to contract these offensive habits, but I have known them to develop in children who grew up to be thoroughly stable in nervous equilibrium and indeed models of staidness and intelligence. Such other habits as putting things in the nose or ears may develop in very young children. The cases of this that I have seen were nearly always due to unfortunate suggestion on the part of parents and nurses. The most striking case of the kind in my notes is that of a young mother, a former school-teacher, who brought her

boy, aged not quite three and a half, to me, some twenty-five years ago and asked me whether I ever hypnotized. I was not long back from Paris, where we had heard a good deal about hypnotism and saw it practiced a little, at least at the Salpêtrière, so I said that I did. She then asked me if I would hypnotize her boy. When I asked her reasons for making such an unusual request, she said: "Well, you remember that some months ago there was a report of a child having put a pea into its ear, which was allowed to remain there unsuspected until it had caused quite a good deal of inflammation and actually required a surgical operation for its relief. I was very much disturbed by that," she said, "and had little cold shivers down my back for fear my boy might do anything of that kind. So I took him aside and told him the story, and said to him, 'Surely you would never do anything like that,' and he promised me faithfully that he would not. Shortly after this I noticed him one day trying to get a pea in his ear. Since then I have been almost afraid to have any peas in the house lest he should do anything like that. I actually found one in his ear one day. I thought that maybe you could hypnotize him and would give him a contrary suggestion and that then he would not do it any more." I told her that I did not hypnotize children, though I believed in contrary suggestion, and had very often when I was younger had contrary suggestion administered to me, but it was always done with a slipper applied over the place apparently intended by nature for that purpose, where it stings but does not hurt. She looked at me a moment, apparently in pained amazement, and said, "You don't mean that I should spank him?" and I said that that was exactly what I meant. "Well,"

she said, as she departed, "I shall do no such thing." I have not seen her since.

RETICENCE OF PARENTS IMPORTANT

Parents should not talk about things of this kind before children, because they act as suggestions on the child mind, and above all they should be extremely careful about warning excessively not to do such things. This grave emphasis is often the one thing that puts the idea of doing wrong and unusual acts into children's minds. Reticence in such matters is a very cardinal virtue. If a child should insert something into his ear there need be no worry about it nor excitement, unless the object is sharp-pointed or is rough and has made some abrasions. Actual injuries or wounds within the ear canal should, of course, be attended to at once, and usually need skilled care to prevent serious complications and results. Small rounded objects like peas, or a small piece of wood, or a fruit pit will do no harm if they should rest in the ear for awhile, and there must be no rough poking at them to get them out. Very often, if the child's head is put gently in its mother's lap, with the ear in which the object has been placed downward, some gentle patting, such as the child may well think to be no more than love taps, will cause the foreign substance to roll out. I have known of a farmer and his wife driving many miles in a temperature far below zero in the Adirondacks to have a pea removed from the ear of a child, only at the end of the journey to see the child put its head gently on its mother's lap because it was afraid of the doctor and have the pea roll out.

Sometimes insects get into children's ears. The child must not be disturbed nor any excitement indulged in, for

a drop of olive or mineral oil will usually entangle the insect's wings and keep it from buzzing, and then if the head is placed downward on a pillow the flow of the oil

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outward will carry the insect with it. If a fuss is made about it, and above all, if the mother goes into a panic over it, the child may actually be shocked to some extent, and the effect of this may be noticed on its nervous system for some time afterwards. There are many other disturbances that may cause forms of "shell shock" besides the explosion of shells. As a rule things that happen in connection

with nervous children should be taken very quietly because of their tendency to over-react to excitement.

CHILDREN WHO BITE THEIR NAILS

Biting the nails is a habit that some children rather easily drop into and that is often extremely difficult to break. It is particularly prone to be formed by single children in the family, or by the girl when there is but a boy and a girl, and when the ways of adult life are thrust on them too early from their constant association with their elders instead of with other children around them. Every physician has seen little girls with the ends of their fingers so deformed by the biting habit that it would scarcely seem possible that they could ever again be presentable, and, after all, the hand is an important element in feminine beauty. Mothers are often in despair, and they are likely to tell the physician that neither rewards nor punishment have any effect, and that the child manifestly cannot help it because he is good in everything else and particularly obedient and not at all of a cantankerous disposition. I have seen children who were said to be model children in everything except this habit. Even a little investigation, however, soon made it clear that there were other faults in the child's character, and that the nail-biting was only a part of a neurotic disposition manifested in other ways. Sometimes the child is too slow in doing everything. It does things, but unless continually prodded takes an unconscionable time over them. Sometimes it has a little habit of repeating things that were said to it, sometimes it has an inveterate mode of getting its own way, sometimes it is very obedient in word but not in deed.

My own experience, however, has been that these nail-

biters, whenever they are not actually defectives, can be brought to correct their habit by arousing their interest in something which they cannot do if they continued to bite their nails. I have known a girl of eleven, bright at school, obedient, good as could be in every other way, nearly break her mother's heart by continuing to bite her nails in spite of everything that might be done. One year a friend of the family offered to take the girl for the first time to the circus. She was very much interested in the circus posters, but had never been to see one. Her mother said that of course she could not go with her finger-nails bitten, that she would simply disgrace the friend who had offered to take her. From that moment the child did not bite her finger-nails for over a year, and then a series of anxieties over examinations brought the habit back again and something of the same kind had to be tried, only this time it was the theatre and not the circus. I have known a little girl who had bitten her nails for years break off the habit when she was told that she could not go to dancing school unless her nails were in good condition. That was the end of the nail-biting for as long as the dancing school continued. The following summer, however, there was a relapse. I have known cutting off the candy supply to prove a cure for nail-biting when the child's reasonableness was appealed to and when it was made perfectly clear that of course if it wanted to eat its fingers then it could not expect to have other sweets.

OTHER METHODS OF TREATMENT

Sometimes to break a habit of this kind it may be worth while to dip the fingers in a solution of quassia, which is very bitter, will not discolor the fingers, has no other effect except a tonic quality that might add to the

appetite, but that will remind the child as soon as the fingers go into the mouth that it must not bite its nails. As is well known, the victims of the habit do not notice that they are biting their nails until sometimes they have worked sad havoc with several of them. The slightly bitter taste, then, is a reminder that calls their attention. There are other habits of this kind, such as picking the nose or the ear or sometimes pulling at the hair, or even pulling at the eyebrow, which correspond in many ways to nail-biting. I have known a girl to completely deform her eyebrows by picking at them, and yet the cure was comparatively simple once the girl's interest in curing herself was aroused by the offer of a privilege that she very much valued, the promise that she should go to college after her high school work was finished.

A habit that disturbs parents very much is that of bed-wetting, or enuresis, as it is politely called when persisted in beyond the infantile months. It occurs a little bit more frequently in boys than in girls and is sometimes very difficult to break. It is discussed more fully in the chapter, "Habits, Good and Bad."

PREVENTION MOST IMPORTANT

It is most important to endeavor to notice and try to prevent the actual repetition of undesirable acts as early as possible and to make a determined effort in the breaking of these habits at the beginning. Excuses must not be made for the children, and they must realize that they are largely responsible for them and can break them if they really try to. This cannot be accomplished, however, by too insistent talking to them about habits, and nagging at them, for that often only emphasizes the habit by making them over self-conscious about it. Children should be

given as much occupation of mind as possible, be out in the open and yet without over-exercise, their nutrition should be good, their hours of rest lengthened and their health improved just as much as possible. Meantime parents must not worry about these habits, for most of them under good physical and mental hygiene get better without leaving any traces.

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XIV

HABIT SPASMS—TICS

"Inepta haec esse, nos quae facimus sentio; verum quid facias?"

"I perceive that the things that we do are silly; but what can one do?"

TERENCE—*Adelphi III.* 3. 76.

* * * *

"Frangas enim citius quam corrigas quae in pravum induerunt."

"When bad habits are once settled they are more easily broken than mended."

QUINTILIAN—*De Institutione Oratorio I.* 3. 3.

HABIT SPASMS—TICS

Few manifestations in children prove more disturbing to parents when they occur than the so-called habit spasms, or *tic convulsif* as the French call them. When this term is translated into English as convulsive tic, as it often is, it is likely to be much more disturbing to parents than the affection it represents should be. In these habit spasms the children make a series of involuntary muscular movements which they seem to be quite unable to control. The movements are often like those which are made for some special purpose, but under the influence of the tic they are made quite purposelessly. At first the child seems to be making funny grimaces, or executing curious movements, intended as it were to make others laugh, and as these are often gone through with at times when laughter is undesirable, the children may even be punished for making fun at an unsuitable moment.

VARIOUS FORMS OF HABIT SPASMS

Habit spasms are more frequent in girls than in boys and usually there are fewer of them after puberty than during the three or four years before, though they may develop even earlier than this. The simplest form of them consists of quick contraction of some of the face muscles. Winking is very common; but the drawing of the mouth to one side is also often seen. Sometimes the neck muscles are involved in the habit spasm, and then the head may be jerked to one side. At times there is a combination of these movements and the head is jerked slightly backwards accompanied by a wink, which in the girl rather strongly simulates a bit of coquetry. Sometimes there are

lip movements at the same time. One of the French farces imported to this country some years ago exploited a habit spasm of this kind by putting on the stage in one of the minor characters a very handsome young lady who threw her head back, winked her eye, and then pursed her lips as if inviting a kiss. Almost needless to say, the men were sometimes tempted to take what seemed so plain a hint, and naturally enough there was trouble where she was about. Such a tic, strange though it must seem, is perfectly possible, though its pathologic character in a charming young woman past twenty might very well be the subject of doubt.

Any muscular movement may become the subject of a tic. The shoulders particularly are likely to be involved, and very often one more than the other. Various spasms associated with breathing are particularly likely to occur. Sniffing, sighing, yawning, or whistling inspiration may all occur. The tongue may be extruded, the lower jaw may be projected, the eyebrows may be lifted, the forehead muscle may be wrinkled up, all as the result of tics. Sometimes they take the form of curious tricks which are not entirely involuntary, and yet are not quite deliberate, and occur in children on a pathological basis. Professor Osler has spoken of a boy at his clinic who had the habit of putting his middle finger into his mouth every few minutes, biting it and at the same time pressing his nose backward and upward with his forefinger. He tells the story of Hartley Coleridge, the son of the great English poet, and himself distinguished in later life in the literary world, who as a boy had the trick of biting his arm. Putting the finger in the nose or in the ear or other similar movements may all come under the head of tics. Various changes of facial expression may be the result of a tic, and without any reason there may be recurring signs of emotion of

joy or grief, or fright or even pain. Tics very often affect the larynx, with the production of grunting or sighing sounds, or sometimes even of particular words. In children the tendency is noted to the utterance of forbidden words, usually vulgar and sometimes indecent.

THE UNCONTROLLED MUSCLES

Any of the voluntary muscles of the body may be affected. There may be the gestures that accompany certain mental states, or there may be twisting or turning movements as if the patients were in an awkward position and wanted to get out of it, or as if the clothes were hampering movement and there was an effort to relieve some discomfort. The head may be lifted and lowered, or may be twisted from one side to the other; indeed the various nodding tics are very common. Almost any ordinary movement may, in nervous children, come to be repeated so frequently as to become a tic.

While most of the nervous habits of childhood and especially in nervous children come under the head of what is called *tics*, it is not well to use that word, especially before the children themselves, for it is likely to give them the impression that there is something the matter with them which is a special disease with a special name, and needs to be cured by medicine or remedial measures of one kind or another. As a matter of fact, the most important element for the cure of tics is the training of the child's will power to the unmaking of these bad habits that have been allowed to form.

PREVENTIVE TREATMENT BEST

The most important element in the treatment of tics is their prevention. They run in families, not by any inevitable hereditary influence, but as a consequence partly of

imitation and of corresponding tendencies resulting from certain weaknesses in the family. Wherever they are known to be likely to occur, parents should be warned of such a contingent possibility, and the first symptom of any purposeless motor habit should be considered the beginning of a tic. As we have said, they are likely to begin in muscles that have been overstrained for any reason, especially when patients are run down. They are often seen after herpes or "cold sores" and certain facial neuralgias.

There is probably no tic, no matter how long or how serious, that cannot be eradicated, or greatly modified, if the patient will take the trouble to try, and if the treatment is conducted so as to gradually get rid of it. Peculiar movements cannot be done away with at once. They can be lessened in intensity and in frequency, and then gradually the patient will be encouraged, as they become less noticeable than before, to make renewed efforts. The habit must be gradually undone, and this will take as long as it did to form it originally. The exercise of contrary muscular movements carefully carried out, and of gentle repression, with definite times of exercise during the day, gradually increasing the length of the intervals of repression, in the end proves successful.

THE IMPORTANCE OF NUTRITION

These habit spasms develop particularly in children who are in poor condition for some reason. Either their nutrition is lower than it ought to be or they have been growing rapidly and not putting on weight proportionately, or they have been getting too much or too little exercise, or, above all, they have not been enough in the air to provide them with the free oxygenation of tissues which they require. A good many of the children come

from families in which neurotic tendencies of one kind or another have existed for generations, and so they are born with a certain lack of control over their nervous systems. Whenever the children are distinctly under weight the outlook for cure is good, and as a rule prompt improvement will follow increase in nutrition, especially if the children are given opportunity to be out in the air a good deal, and are not required to sit long hours on school benches, nor permitted to occupy themselves with such things as attendance at the movies. Sometimes older girls of fifteen or sixteen subject to the affection may have become so interested in their studies that to take them entirely away from the school will do them more harm than good. In these cases it may be found that part-time attendance at school, or a special arrangement for private tutoring, will help to give them a feeling that they are not dropping entirely behind their class, and may prove good for them generally.

Habit spasm is usually a passing affection that will disappear of itself with even a reasonable amount of care of the general health. Sometimes some portion of it may remain, and this may have to be overcome by careful cultivation of a contrary habit; but principally by getting the patient so occupied with other interests that the tendency to the tic is gradually lost. The children of the poor get over the condition completely, as a rule, and it is the children of the rich who most frequently have some remains or sequelæ of the affection. Sometimes this is due to the fact that well-to-do children are not fed properly; for in recent years we have come to realize that the children of the wealthy frequently suffer from a certain amount of starvation because they have gotten out of the habit of eating the simple things that are most nutritious, and have

various fads in eating and caprices with regard to their food which make it very difficult to have them take a reasonably complete diet. Besides, the children of the rich are likely to be much more self-conscious, and this condition favors the tendency for some portion of the tic to persist.

A MORE SERIOUS HABIT SPASM

What is known as the *impulsive tic,* or is sometimes spoken of as Gilles de la Tourette's disease, is another affection somewhat resembling habit spasm but much more serious. It has been traced in history for as long as records are available, but was first described some thirty years ago by the French physician after whom it has come to be named. It is not merely a nervous, but to some extent at least it is a mental disease. Not only the nervous system gets from under control, but the mind is also affected to a slight degree, and sometimes this constitutes the most important part of the affection. It partakes of the nature of habit spasm because it involves involuntary muscular movements, usually affecting the face or arm muscles, but any of the muscles in the body may become affected and the movements may be very irregular or even at times violent. What is particularly characteristic of the disease is that the movements are accompanied by explosive sounds, sometimes a half-cry, sometimes resembling a bark or an audible sigh, and occasionally even words are repeated. Some word that has been picked up may be repeated over and over again, usually in the midst of the involuntary movements. Where words are repeated soon after others have used them, the term *echolalia* has been applied to the affection. Occasionally actions of those around the victims are mimicked by them and then the

affection is called *echokinesis.* These are only Greek designations for the prominent symptoms of the affection.

SUITING THE WORD TO THE ACT

Occasionally children develop as a sort of pseudo-impulsive tic the habit of repeating certain words which they have heard and which seemed to shock people when they were uttered. This condition has been given the thoroughly dignified name of *coprolalia,* a term which could scarcely be translated into Saxon English without an apparently unpardonable lapse into vulgarity. It is easy to understand how shocked a mother is if, for instance, her daughter, aged six or seven, comes home, and interlards the word "bitch" into her conversation every now and then. Sometimes, of course, the children do not quite catch the real expression, and I have had a mother tell me of her son coming home from one of his earliest experiences at school to say to his little brother, "You sonny rich." I am sorry to say that investigation disclosed that her boy had heard the minister's son use some such expression as this, and he was imitating him. Such expressions as "damn" or "son-of-a-gun," or "son-of-a-sea-cook," prove quite disturbing to an elegant mother's ears, but considering the tendency of the little human animal to imitate what occurs around it, they are not surprising. Nervous children are more likely to acquire such habits than others, and it is often difficult to know what to do to prevent them, for an ounce of prevention is actually worth many pounds of cure. Yet these children need outing and intimate play with other children for the benefit of their nervous systems, for in spite of the danger of their picking up such expressions, children must not be kept too much at home.

It seems best, as a rule, not to notice such outbreaks of the little ones, and to be sure not to laugh at them. To

be dreadfully shocked is probably worse in its effects than anything else. If a definite course of thoroughgoing neglect of the habit does not prove curative, as it usually will in the course of a few days, then other measures may be tried. Professor Charcot's well-known case must not be forgotten. The little boy had acquired the habit of saying the word which the French corporal used when someone tried to tell him that it was the Prussians who had licked Napoleon at Waterloo. In its Anglo-Saxon form of one syllable it is rigorously tabooed in polite society. One can understand how shocked the French mother of the better class was over her boy's habit, and she was afraid of his contaminating his younger sister, so she sent him for a time to be under Charcot's care at the Salpêtrière. The boy rather enjoyed the attention which he attracted at the hospital, and his habit was, if anything, worse than before. After he had been a few days at the hospital he wandered out to the gate one day to watch some boys play marbles, and while watching the game gave utterance every now and then to the word. The boys were rather startled at first, and then resented it, and finally, when it was repeated after one of the larger boys had made a misplay in the game, he proceeded to give the little victim of coprolalia a good thrashing. That ended the coprolalia right then and there. Unfortunately it is not always easy to have the discipline administered under such ideal circumstances.

REST, AIR AND FOOD

As a rule, however, the impulsive tic is deeply rooted in the nature of the individual and represents a definite lack of mental and physical control. When it develops as the result of running down in weight, especially in connection with close school work, and perhaps the worry of

competitive examinations, the outlook for recovery is always rather good. It is better in girls as a rule than it is in boys, though the affection is more frequent among girls. Even in boys, however, complete recovery is almost the rule. Child sufferers from the affection should be given a physical and mental rest, but it must not be forgotten that it is an extremely difficult thing for the mind to do nothing, and that this is particularly true in children. Various simple forms of diversion should be provided, then, and the child should spend at least twelve hours in bed and usually have an hour lying down in the afternoon, but with abundance of air in the sleeping room and the afternoon nap taken in good weather with windows wide open or on a sleeping porch, for practically nothing else is so important as air. When the children are under weight proper training of them in eating simple things is a cardinal factor in the treatment.

THE TENDENCY TOWARD SPASMS

A tendency toward spasmodic movements in children, jerks of various kinds, sometimes spoken of, because we like to hide our ignorance of causation under long Greek names, as *spasmophilia*, or a proneness for spasmodic movements, occurs occasionally in nervous children. The affection is known also as tetany or tetanilla from a resemblance to mild tetanus. The origin of this disease has been very much discussed in recent years and it is now generally recognized that it is due more frequently to some disturbance of nutrition consequent upon a deficient dietary than to anything else. Careful studies have shown that certain of the salts, mainly the calcium salts, the phosphates, and the like, are not being absorbed by the child in sufficient quantities to insure normal nutrition and interchange of substances between the tissues through-

out the body. This is an extremely important condition that needs to be seen to at once, and an experienced physician who has kept up to date with regard to recent developments as to the necessity for vitamines and an equilibrium of salts within the body should be consulted at the earliest symptom. Where good fresh milk can be secured this is a most valuable part of the treatment. Cod-liver oil is also an invaluable remedy. Skimmed milk, and certain of the prepared milks or boiled milk may actually be productive of tendencies toward the affection. That exposure to sunlight, or even to certain kinds of artificial light, such as the " quartz " lamp, will increase the amount of calcium in the child's blood furnishes experimental proof that life in the open air and plenty of sunshine are especially desirable for all spasmophilic children.

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XV

HOW DREADS AND DISLIKES ARE FORMED

"What begins in fear usually ends in folly."

Table Talk—COLERIDGE.

* * * *

"I know that oft we tremble at an empty terror, but the false phantoms bring a real misery."

SCHILLER—*Piccolomini V.* 1. 105.

* * * *

"The thing in the world I am most afraid of is fear."

MONTAIGNE—*Essays—Fear.*

HOW DREADS AND DISLIKES ARE FORMED

A distinguished French neurologist ventured to say not long since that he was quite sure that at least half of all the complaints of mankind, that is, the reactions to disease (this word after all in its etymology only means discomfort), come from dreads rather than real physical ills. He did not hesitate to declare that his own practice in the field of neurology showed him very clearly that so far as the functional nervous diseases are concerned a good deal more than half of them were either due to dreads entirely, or the underlying conditions of them had been exaggerated by dreads into the state that brought them for treatment. Most of mankind after youth is passed are prone to get themselves into the state of mind of being afraid that something serious will happen to them or is hanging over them. Especially is this true if they are living sedentary lives indoors to a great extent and not getting as much exercise as they should have. As an almost inevitable result of the persistent attempt to live so differently from what nature intended that they should, they inhibit through dreads certain very natural processes and even important functions in the body, and thus produce symptoms that are annoying at least, and may after a time seem to be unbearable, so that they feel they have something serious the matter with them which must be treated before they can feel at all well.

TROUBLES THAT NEVER HAPPEN

These fear thoughts are responsible for more suffering, or at least poignant discomfort, among men and women than most of the real ills of mankind. He was

indeed a wise and experienced man who in response to the question asked when he was very old as to how he had enjoyed life replied: "Oh, I have had a lot of troubles, but most of them never happened." Mankind has a definite tendency in the direction of making trouble for itself. The origin of this tendency can very often be traced back to childhood. Nervous children are particularly prone to accumulate the roots of many of these dreads and obsessions of later life in their early years. Not infrequently these are the consequence of their environment or of unfortunate suggestions that are made to them in early years. With a little care much can be accomplished in keeping children from suffering from these troubles that never really happen. There is more need for care in this matter now than there was before our time. Discussions of disease and of ill-health are in the air. A great many people, and especially those of the better-to-do classes, are given to talk much about such things and children are veritable "little pitchers with large ears" and accumulate many unfavorable suggestions that form the substratum of a great deal of their thinking in after life, often without their quite realizing where the unfavorable suggestion originally came from.

WEEDS IN THE GARDEN OF THE MIND

Children may very readily have ideas implanted in their minds during their early years which will prove the source of solicitude and anxiety to them later on in life. They often hear opinions expressed with regard to foods, for instance, which in their early plastic years may make indelible impressions. Some old-fashioned relative will proclaim that eggs make her bilious, or that milk is constipating, or that the night air is dangerous to health, or that veal is unwholesome, or some very modern maiden

aunt may announce that raw food is dangerous because the living microbes on it have not been killed by cooking, or that raw fruits cause over-acidity, and such expressions may serve to be the source of solicitude that will rise even to the plane of dreads later on in life. It is surprising how much we have had to unlearn of these older false impressions in recent years. We know now that some raw foods are necessary for human beings to prevent them from acquiring certain diseases, like scurvy, or beri-beri or pellagra, diseases which indicate a lack of definite nutritious elements in their diet. We no longer hold any prejudices with regard to veal, but know that when properly cared for and cooked unspoiled it is quite as digestible as chicken, and indeed is very much the same sort of meat. We know now that the only pure air at night is the night air, and that instead of the night air being more unhealthy than the day air, it is probably, because of absence of dust particles from it, a little less liable to carry microbes and is therefore less likely to produce disease of any kind.

We might go through a whole list of false notions that often are imparted to children, not deliberately, but by chance hearing, from those whose opinions the children think they have a right to accept. They may hear, for instance, that cheese is indigestible and that it is particularly likely to give them nightmares and other disturbances of sleep. Cheese is an unusually valuable article of diet, especially important for its calcium content, and therefore good during the growing period for skeleton and teeth. It is true that a few people have an idiosyncrasy for it and they must not take it. Some of the best sleepers that I know are those who take a Welsh rarebit shortly before going to bed. Nuts are sometimes said to be indigestible, though when properly masticated and eaten in moderation

they represent a valuable article of diet for older children that is coming to be thought more and more of.

Josh Billings once said that "it would be better not to know so much than to know so many things that ain't so." We have had a whole series of "things that ain't so" bruited about in the family circle for the ready ears of children to catch and their suggestible minds to hold.

MANUFACTURING FOOD DREADS

As a rule conversation with regard to food, except for the recommendation of good foods, is better avoided in the presence of children. Suggestions that older folks around them do not care for certain foods often lead to the formation of dreads and create inhibitions which keep children from taking such a variety of diet as is best suited for them. These food inhibitions, often almost unconsciously acquired, sometimes persist all during life. It is surprising how often young folks who show signs of pulmonary tuberculosis present a history of distinct revulsion against some of the most nutritious kinds of food that we have. For some reason eggs and milk and cheese are particularly likely to be the subject of such inhibitions. As a result sometimes for years these foods have not been taken, or taken only in very small quantities, and the patients have been without these valuable fundamental elements of a wholesome dietary.

Not infrequently it seems probable that these food caprices have been a predisposing cause to the development of tuberculosis in some cases. Practically all of us acquire tuberculosis in our early years—that is, the tubercle bacilli grow somewhere in us—but in the great majority of us its growth is choked by our resistive vitality and the bacilli become encapsulated, that is, shut off from any direct connection with the tissues, and fail to grow. In a

certain number of people, however, in the midst of the often rather rapid growth of the late teens or early twenties the nutrition of the individual is lowered, and as a result some of the encapsulation of the tubercle bacilli breaks down, and they may once more begin to grow actively and even be disseminated throughout the body. Such a condition develops particularly in those who are thin and under weight. For many years I have been a consultant at a tuberculosis sanatorium, and over and over again I have been impressed with the fact that these thin consumptives were not taking milk because of some dread fostered with regard to it while they were young. Sometimes in addition they were eating comparatively little butter, either because they feared it would make them fat, or would prove the source of pimples, or would interfere with the digestion of other food materials. Not infrequently these patients also had a prejudice against eggs, either because they were supposed to cause biliousness, or give them some other vague disturbance of the digestive tract. The patients did not quite know how they had come to acquire these prejudices, though they were firmly convinced that the milk products and eggs disagreed with them. Cheese was usually included with the butter prejudice, but cheese is used so little by many people that often it is not mentioned. The result of this combination of inhibitions was that these young folks were denying themselves practically all of the most important foodstuffs that are above all so necessary for the growing years.

THE PROOF OF THE PUDDING

As a rule no attention is paid to the objections of such patients when they reach the sanatorium, but they are told to take milk and eggs and butter as the others around them, and it is not an unusual thing to have them come to

the doctor after two or three weeks to ask him how it was that they imagined that milk and eggs and butter disagreed with them. They have learned now to take them and find that they like them. Already they have seen the gain in weight that comes from eating them in reasonable abundance and they wish that they had done it before. The sad thing about it is the number of young folks whose lives are ruined or at least whose health is seriously impaired for years as the result of these dreads or fear thoughts acquired when they were young, often so unconsciously that they have no idea when their dislike toward these classes of foods first manifested itself nor to what it was directly due. Very often, however, such food dreads can be traced to a habit on the part of a relative of abstaining from some of these foods, which was so noticed by the child that the habit and the explanation of it became deeply grooved in their developing minds.

This constitutes one excellent reason why children should, as a rule, have their meals by themselves and not with adults. If they are to be properly brought up they have to be refused many things which they see around them on the table and occasionally reasons are given them for the refusal which become firmly imbedded in their memories and from there often, though they are not quite aware of it, influence the choice of food in subsequent life. During their early years children should be encouraged to continue to take milk and eggs and butter in abundance, unless they have some very definite digestive intolerance against foods, which occasionally, though very rarely, happens. They will develop an idiosyncrasy or a dislike by imitation if they hear some older person at table say, "Oh, I cannot take milk, it gives me indigestion," or, "I cannot take eggs, they always affect my liver," or "I cannot take butter because of my complexion."

Children, and especially those of nervous temperament, are only too prone to cultivate inhibitions for themselves quite apart from those which come to them from suggestion. There is a very definite negativism about children, and the livelier and more intelligent they are the more it is likely to be noted that the first response to almost any urging is prone to be one of opposition. This negativism often leads them, as they pass from infancy into childhood, to refuse through caprice, more than anything else, various vegetables. There are a good many children, for instance, who refuse to take tomatoes, and there are a good many adults who will tell you that a taste for tomatoes was acquired after they grew up, and they had to overcome certain disinclinations in order to acquire the taste. Something of the same thing is true for nearly all the vegetables that are eaten raw—lettuce, celery, and even for certain fruits, as apples. In recent years we have come to appreciate properly the value of raw materials in the diet. They supply certain living elements that are extremely precious for health and strength and for that coördination of vital factors in the body which means more for good health than almost anything else. Children's own inhibitive tendencies in such matters should be overcome as far as possible, but above all should not be increased or initiated by suggestion.

WHEN SCIENCE OVERTAKES NATURE

How much humanity would be saved of disturbance of health if only dreads could be eliminated. In recent years, however, one of the main businesses of civilization has been the cultivating of dreads, and children are so much more susceptible to suggestion than grown people that they have suffered more from them, often entirely without any good cause. Always think not twice but at

least half a dozen times before instilling a dread of any kind with regard to health and food and the like into a child. We have had any number of examples where the child's instinct has proved a better guide than the supposed science of its elders. One example will illustrate very well. Practically any child has to be prevented from eating orange peeling because it always found this substance tasty and satisfying. Today we know that orange peeling contains as much of certain vitamines as almost any other material that comes to us, and in addition leaves valuable residue for the encouragement of intestinal peristalsis. Yet for more than a generation we have been setting up a dread with regard to possible ill effects from orange peel while child instinct has always pointed the other way. Science has at last caught up with nature. This surely should be a warning for those who would set up food dreads in child minds, unless they are sure beyond all doubt of the reasons for what they say.

BEING AFRAID OF THE DARK

A series of dreads may very readily be established in connection with the dark that may make life very uncomfortable for the subjects of them later on in life. Children should never be made by suggestion to fear the dark. On the contrary, as far as possible, they should be just taken into a dark room, put in bed and then allowed to go to sleep without rocking or coddling. They thus become accustomed to darkness and are saved many uncomfortable feelings in later life. Almost needless to say, children should not be scared by waking them suddenly, and above all not by calling to them or making a loud noise that is calculated to disturb them. They should be wakened by gently touching them and talking quietly to them, for otherwise nervous children get a sort of habit in their

nervous system of reacting in an exaggerated manner to sudden noises around them. Fortunately the celebration of the Fourth of July in this country is no longer of a kind that is calculated to seriously disturb nervous children. Many a grown person of our day still suffers from

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some of the nervous superexcitability which was induced by the old-fashioned celebration of the Fourth of July with its cannon and fireworks, especially noisy on the night before the Fourth.

THE DANGERS OF "HORRIBLE EXAMPLES"

Dreads create symptoms or oftener exaggerate the significance of those that are present. Probably nowhere in human life is it more true that a little knowledge is a dangerous thing than with regard to disease. Children should not have much said to them about disease, though a great deal ought to be said to them about health and its preservation. They are not to be warned by having horrible examples of ill-health held up to them, but, instead, by having the happiness and heartiness of good health dwelt upon. Man is so constituted that he does not like to be

enforced into doing things by the threat of the evil that may follow from neglecting advice. A great many children have had an unfortunate consciousness of their inwards created in them by current physiological and so-called hygienic teaching concerning the evil effects of alcohol and tobacco upon the digestive organs. Lurid pictures of hyperemic stomachs due to over-indulgence in alcohol have been presented in the school text-books, supposedly with the idea of directly producing in the mind of the student an antagonism toward the use of intoxicating liquor. Unfortunately pupils that have seen this colored plate have long afterwards remembered it as a representation of what the stomach must get to look like when it is irritated in any way, and this has made them extremely conscious of their interiors whenever they have had any feelings of discomfort either in the stomach region or what they thought was the stomach region.

Much talking about disease and dwelling upon symptoms causes young folks, most of whom are very suggestible, to notice their own feelings much more than would be the case otherwise. Whenever there is definite consciousness of a part of the human body two things happen that serve to exaggerate the significance of any feelings present in that part. The first of these is that a series of other cells in the nervous system, besides those directly connected with the external sensation, are brought into intimate contact with those directly affected, and this multiplies the discomfort occasioned. This is what the great Spanish anatomist of the nervous system, Ramon y Cajal, called the "law of avalanche." Just as a few stones, or even one, that start rolling down the mountain may disturb and displace a number of others, until finally they gather about them an avalanche of material that can work very serious destruction, so a few cells in the

nervous system suffering from discomfort may, if the consciousness is concentrated on them, cause so many other cells to be affected by the discomfort as to produce a positive torment or a torture that is almost, if not quite, intolerable.

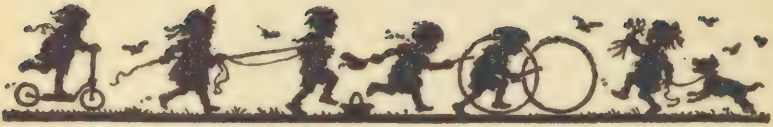
Besides, whenever the consciousness is thus concentrated upon any part of the body, there is a widening of the blood vessels to that part which causes hyperemia, or congestion, and makes the part more sensitive. We all know how much more sensitive to even slight touches the cheek or the hand becomes when either has been exposed for some time to the cold air, thus calling the blood to the surface. Something like this happens when much attention is paid to a part, hence the exaggeration of a slight feeling which may be scarcely more than physiological into what seems a symptom of disease. After all, disease in its etymology means only discomfort, and by an old-time convention we talk of most diseases as complaints, indicating that it is, much more than anything else, the reaction to the feelings, whatever they are, that is in question.

TEACH HEALTH, BUT NOT DISEASE

It is extremely important, then, that we should not add to the tendency in humanity to exaggerate the significance of its feelings by filling the mind of the young with thoughts of all kinds about disease. As the result of the tendency in this matter our generation is probably more foolish with regard to its health and more filled with dreads than any other has been for a long while. This sends people to quacks and charlatans, who reap a rich harvest. We have around us in our large cities now an immense number of men practicing all sorts of irregular treatments, most of which do absolutely no good, except to supply a little exercise to people who are too lazy to

take exercise for themselves; and yet these practitioners acquire great prestige, and a great following among people who are supposed to be educated, because of the cures that they make. It is a disgrace to the education and the reasoning powers of our day that this should be so, but the root of the evil is the constant talk about disease and symptoms which so many people keep up even before the young until even the minds of the little ones are filled with the idea that affections of all kinds are lurking all around them, ready, like the goblins, to get them unless they watch out.

This cultivation of dreads of ill-health among the young should be avoided as carefully as possible, and they should have the value of positive health talked to them, and the fact that human life is now ever so much freer from disease than it used to be, and that the span of life is ever growing longer on this earth. Above all it should be emphasized that there is ever so much less need of medicine and physicians for sickness than there used to be. We are, instead of seeking advice from physicians concerning the occurrence of disease, cultivating natural living, eating good simple foods, with an abundance of air, water, exercise and a proper amount of sleep—all this in our physical life, while mentally we refuse to be occupied with thoughts of evil and worries concerning the things that may never happen to us, while we dwell on the possibilities of good and how much of health and happiness may be looked for in life.



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XVI

BACKWARD CHILDREN

"Children had rather be making of tools and instruments of play; shaping, drawing, framing, and building, etc., than getting some rules of propriety of speech by heart, and those also would follow with more judgment and less trouble and time."

WILLIAM PENN in *Some Fruits of Solitude.*

* * * *

"Ignorance seldom vaults into knowledge, but passes into it through an intermediate state of obscurity, even as night into day through twilight."

COLERIDGE—*Essay XVI.*

BACKWARD CHILDREN

The development of legislation for compulsory education, until it has come to include all the children up to the age of fifteen who are capable of being educated, has clearly brought out the fact that a large number of our growing young folks in this country, not a few of them from the better-to-do classes in the community, and with numerous examples from all classes, are distinctly backward in intelligence. This does not mean that they are imbeciles or idiots, though the number of these special unfortunates has increased constantly in recent years, more than in direct ratio to the population, but that a considerable proportion of children are of distinctly lower mental capacity than is commonly expected for their age.

A great many of them are incapable of taking advantage of the opportunities for education afforded them even in the ordinary elementary schools. Some of them succeed quite well in the earlier years and then prove incapable of further progress. Their minds do not grow up beyond the age of ten or twelve, but remain definitely immature. Many of them require special training to enable them to advance at all in their school work, and the number of school children for whom a provision of special classes has to be made in the educational system, because of mental backwardness, is constantly growing and there is an impression prevalent among educators of experience that this number shows a tendency to increase still more rather than to decrease.

EARLY RECOGNITION IMPORTANT

As a rule it is quite important to recognize these backward children for just what they are as early in life as may be possible, in order that they may have the advantage

of special training. This will keep them from falling into a rut of non-progressiveness, in which they become very much discouraged, and have whatever little initiative they may possess dwindle almost to nothing. Parents find it difficult to admit to themselves, and above all to confess to others, the fact that a child of theirs is backward; and yet they must be prepared to make such recognition for the sake of the children themselves. We used to think that this was a problem which concerned only a very few children, but the more careful investigations and larger experience of the school system in recent years have shown us that there are a great many children whose mental capacity is distinctly limited, and who cannot be expected to advance much beyond a certain point no matter what educational opportunities are provided for them. The feeling a generation ago was that almost any young person who really wanted to get an education could secure it by applying himself or herself properly, and that failure to advance in school was, for the vast majority of pupils, a matter of will alone. Now we have come to realize that it is very largely a matter of the quality of intelligence, and that a very large proportion of human beings are not gifted beyond a limited degree; that is, they are not possessed of the intellectual faculties that would enable them to take advantage of more than a very limited elementary education.

RETEACHING THE BACKWARD CHILD

It has been found that approximately forty per cent. of school children failed to progress through the various grades of the elementary schools at the expected rate. At least one-tenth of the nearly half a billion of dollars which are expended every year in the United States for the

maintenance of elementary schools is devoted to reteaching children that have already been taught during the year, or at least six months of the year, but have failed to learn. Miss Elizabeth Farrel, Inspector of the ungraded classes of the Department of Education of the city of New York, has estimated that there are over 22,000 children in the public schools of that city who cannot be expected to keep up with the grades and must be given special attention at special expense. In various states throughout the country in which surveys have been made with the purpose of determining the intelligence of the school children, a very large number, always far up in the thousands, were found to be distinctly retarded in their progress through school by the lack of intelligence, and probably two per cent. of the whole number prove to be incapable of taking any but a very small amount of education. A great many showed symptoms of mental defect, or dulling, as time went on. They had succeeded at first in getting on in school, but after a time had evidently reached their limit, and then there was no hope of further progress or but very slight prospect of improvement.

TESTING THE AVERAGE INTELLIGENCE

The war provided an opportunity for the testing of the average intelligence of the young men of the country and the results of the tests were startling. It was known beforehand that a certain considerable number of the men between twenty-one and thirty-one who would be physically capable of passing the draft boards would be utterly incapable of taking military training advantageously. Their presence would simply delay the others in training, they would represent a hopeless awkward squad, and as time was an extremely important element in the war, it

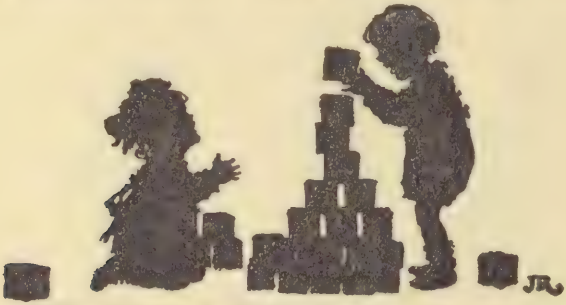
seemed worth while to take any means that promised to discover and eliminate these very backward young men and save time and effort that would be spent to no purpose. In order to secure definite data for judgment in this matter an intellectual test of all the enlisted men was made, so that altogether nearly a million and three-quarters individuals were subjected to a psychological examination. By arranging this test carefully it was found that the general intelligence of the men might be rated successfully, and at the same time those who were hopelessly backward surely discovered and eliminated.

The results of the tests were surprising. About ten per cent. of the men were found to be in a class that could not be expected to take military training with any success. Another ten per cent. were so backward in intelligence that while they might be permitted to remain in uniform, the army department experts in psychology suggested that they should not be employed for military duty directly, but should be set to doing various tasks connected with the army that would have to be performed by someone, but that did not require such promptness of response or initiative as would be needed in actual soldiering. They would thus take the places of soldiers of a higher order of intelligence who might be used advantageously at the front. As a rule these men could be depended on to do what they were told directly and immediately, or to accomplish purposes under the direction of others; but they were quite incapable of taking up any work that required personal initiative or any thinking for themselves. They were capable only of rather simple accomplishment, but would surely fail when complex situations were presented to them; and no amount of training would give them the

power to do more than follow example or straightforward immediate direction.

INTELLIGENCE AVERAGE SURPRISINGLY LOW

The mental conditions that were found in the remainder of the army, representing as it did the rank and file of our population taken as it came, was even more interest-



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ing than the larger proportion of incapables that were recognized. The mental test given was rather searching, but not difficult. It required alertness and promptness and clearness of thought, but not more. Memory, as such, had almost nothing to do with it. Educational opportunities were of comparatively no significance for it. It was a test of the mental capacity, not of the attainments. The marking was not severe, but on the contrary quite mild. Men who answered two-thirds of the questions were given A, men who answered a little less than three-fifths, B, while those who answered one-half of them were given plus C. In spite of this lack of rigor in marking, less than five per cent. of the candidates examined could be awarded A, less than ten per cent. B and only about twenty per cent. of them plus C. All the rest were below that mark, and the conclusion was that the

average intelligence age of the drafted men as a body was about thirteen years.

Almost needless to say, when men between the ages of twenty-one and thirty-one have not developed intellectually beyond the age of thirteen they never will. No matter how slight the opportunities that have been afforded them, they surely would have developed adult minds if

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they had the capacity. Any ordinary environment would bring out their mental qualities without the necessity for schooling. They might lack information, but if they had intelligence they would have the power to think for themselves for the solution of such simple problems as were presented to them.

Of course the result of such a mental test is not absolute. No one recognized that better or more readily than psychologists themselves. There is no doubt, however, that the test gave those who made it a searching insight into the mentality of the young soldiers.

When officers who had been in close contact with the men for several months were asked to grade them from their experience with them into similar classes to those of the psychological examiner, the marks given by the two

sources differed by two classes in individual cases in less than one per cent. of the total. The psychological expert, who did not know the men personally at all, and had come into camp and examined them for a single hour, had learned something basic about their mentality which enabled him to classify them as well as those who had known them from six weeks to three months. Manifestly the test, then, had a very definite value in revealing mentality, and must be taken to represent the grade of intelligence of the men within comparatively narrow limits.

WHY THE WORLD HAS SO MANY FAILURES

Since this is the case it would seem that we have been expecting too much of the growing youth of the country, and that there are a great many who will prove to be backward when asked to do anything beyond very simple tasks. Whenever any genuine thinking is demanded of them they will surely fail. That is, after all, in accord with common experience. The majority of men who go into business fail. The proportion is so high as to be almost incredible, but not after the war psychological test. A great many parents, then, must expect that some at least of their children will prove to be distinctly of limited mental capacity, and they must not demand too much of them. If this were kept in mind parents would be saved a good many disappointments, and children who are not capable of taking mental training beyond a certain limited degree would not be stimulated into an irritability of mind that may prove rather serious for their mental and physical health. Such children might indeed be benefited if some simple manual training should be substituted for the regular school course.

It must not be forgotten that the suicide rate among young folks is increasing every year, and the average age

at which suicide occurs is coming down. Not a few of these unfortunate events take place among children who are being pushed at school beyond their ability and their powers to take education. Very often in the early years they have done well and been able to keep up with their classes without much difficulty. As time goes on it becomes increasingly difficult for them to do so, until finally they find it impossible to keep up further, and then they suffer the grievous disappointment so likely to come to youth and to seem almost hopeless. Their early success is often supposed to be evidence that they could succeed if they only wanted to, and it is supposed that their will, and not their intelligence, is at fault; but they reach a point in education where study becomes a nightmare for them, where it is quite impossible for them to get on with their class, and if pushed some break is certain to occur.

THE SUICIDES AMONG SCHOOL CHILDREN

The suicides of school children, having grown increasingly common, are frequently reported in the newspapers. When read by the school children themselves, especially by those of the type we have suggested, the story forms a never-to-be-forgotten suggestion which may prove only too serious when a moment of deep discouragement and disappointment comes. Such children are eminently suggestible. They do not think. They take the ready-made thoughts of others and act on them. The best prophylaxis against such unfortunate developments is a reasonably sympathetic recognition of the young person's intellectual status, though of course, with parents as busy as they are with many things in our time, this can scarcely be expected, and with teachers occupied with schoolrooms crowded with forty or more children there is no one

to take that personal interest which is so important for these cases.

THE MOUTH-BREATHING CHILD

In not a few children backwardness in mental development is intimately connected with mouth-breathing. Children who have some direct interference with nasal breathing (for the normal human being under ordinary circumstances should always breathe through his nose) are sometimes lacking in physical vitality, but are often backward in mentality. A study of this subject under experimental conditions in connection with the public schools of New York showed that when plugs were introduced into the nostrils of school children their memory power was distinctly lessened. When but one nostril was plugged the children could not memorize as readily nor as well as when they were breathing normally. Undoubtedly the presence of a plug in the nostril proved a source of distraction to the child which hampered such concentration of mind as would enable it to use its memory to the best advantage. Suggestion would play a very important rôle in such experimental cases, and if the children had the slightest hint of what they were being experimented on for their memories would surely be impaired. Apart from that, however, the lessened amount of oxygen which finds its way into the blood, because of the interference with breathing, actually seems to make mental processes connected with brain cells—and no mental operation is so clearly associated with brain cells as memory—much less active than they are under normal conditions. This is not surprising, though this experimental demonstration of it is very interesting as a definite confirmation of what has been observed with regard to the mental slowness of mouth-breathers.

Mr. Felix Arnold, the New York school principal who made the experiments on the boys from the fifth to the eighth grade and provided such controls for his experimental results as to make the conclusions quite assured, summed up his results as follows:

"In all cases of obstructed breathing, from whatever source, there will be a loss in the results of memorizing verbal matter of from ten to thirty per cent. When the work is new and difficult, the loss will run as high as fifty per cent. In terms of class-room practice, obstructed breathing prevents any progress through drill, and hinders assimilation of new matter sufficiently to cause non-promotion of the pupils concerned."

MOUTH-BREATHING FROM ADENOIDS

Only rarely are children's nostrils actually plugged by polyps or other new growth or by irregularities of the nasal septum, though occasionally lack of cleanliness makes nasal breathing almost impossible. During an acute coryza, or "cold in the nose," the easy task of learning memory lessons is sadly hampered. The commonest interference with nasal breathing that disturbs mental activity is the chronic stoppage of the nasal passages which comes from the presence of adenoids, that is, the overgrowth of glandular tissue in the naso-pharynx or back of the throat and nose. These often plug up the posterior nasal passages and must be removed. There are so many cases now on record where children who were definitely backward were greatly improved by the operation for the removal of their adenoids, which left them free to breathe normally through the nose, that there should be no hesitation now in having mouth-breathing children thus treated. When it is added that mouth-breathers are very subject to "colds" in the nose and throat, and that they are likely

to catch the infectious diseases much more readily than other children, we have given additional reasons why this simple surgical operation, which usually does not take long, and is very rarely followed by complications, should be performed during the early years of life, before a lasting effect is produced on the child's mental and physical nature. The discovery of the necessity for this operation is one of the great advances of modern medicine and surgery.

It is often a source of wonder that the overgrowth of the adenoid tissue in the back of the nose and throat should be apparently so much more common now than it used to be. There are certain good reasons in some modern habits of life, however, which probably account for this greater frequency. These may be modified to the child's advantage and need to be carefully regulated in delicate children.

The ring of adenoid or glandular tissue at the back of the nose and throat is developed for the purpose of protecting the organism from invasion by bacteria which might find their way into the lungs with the inspired air. They are caught on the moist surfaces of the mucous membranes, and the glandular tissues contain cells that are very active bactericides, that is, destroyers of bacteria. This function when properly exercised produces distinct immunity to a number of infectious or bacterial diseases. When the individual is in good health the glands act very efficaciously and remain themselves uninjured. When children are delicate in health, however, but above all when they have to live in air that is dusty—and it must not be forgotten that nearly every dust particle carries bacteria on it—the gland elements are unable to dispose of the bacteria as rapidly as they come to them, and as a result become irri-

tated. This irritation causes an overgrowth, with consequent interference with the breathing space.

There are certain habits of modern life which seem to favor this overgrowth. Crowded city life, with dusty city streets as the only playgrounds for the children, are important factors. Probably the mode of eating is even more important. The great distinction between the care of the child in the olden times, when the condition of both the teeth and the throat were so much better than they are now, is that in preceding generations young children were not fed so exclusively on a soft diet as they are at the present time. They were given a number of articles of diet that required rather vigorous chewing. Crusts of bread, bones, certain of the raw vegetables and raw fruits, formed part of the dietary, and this led to better development of the jaws and to greater vitality of the teeth. At the same time the coarse character of the food stimulated the flow of saliva, cleaned the teeth and the gums by attrition, and tooth decay was not nearly so common as it is at the present time. Practically no caries of the teeth is noted in the mouths of mummies of young children from Egypt, though in our time it is extremely rare to find a young child's mouth, even at the age of five or six, without definite tooth decay.

INFECTION FROM DECAYED TEETH

When there is caries of the teeth bacteria grow luxuriantly and are constantly present in the mouth in considerable numbers and are swallowed from time to time. During this process they find their way over the adenoid tissues of the back of the mouth, and after a time their removal proves too great a task and irritation is set up, with overgrowth of the tissues. When hard materials, that is, tough substances of various kinds, are chewed, not

only are the teeth cleaned by the coarse food particles and the flow of saliva increased, but these materials in being swallowed carry with them a number of the bacteria of the mouth on into the stomach, where they are rather readily disposed of by the gastric juice. The softer food of the modern times does not serve the same purpose so effectively, so that it would seem to be extremely important to take care that children have certain hard materials to chew regularly, even from before the end of their first year. By this is meant stale bread crusts, certain of the raw vegetables and fruits.

THE JAW AND CHARACTER

I suggested some years ago in a paper on "Habit, the Jaw, and Character," read before the American Society for Orthodontia, that vigorous chewing, by bringing about better development of the lower jaw particularly, though probably also of both jaws, might produce better development also of the skull, and by providing more room for the brain growth, favorably influence character and the intelligence. The idea may seem far-fetched, and yet it is worth while realizing that many of the sons of the poor seem to have a driving power and a determination dependent not so much on their breadth of jaw, for in recent years careful observation seems to have negatived that as indicative necessarily of character, but on the broad development of the base of the skull. This would be another argument for being sure to give children hard things to chew just as soon as they begin to get their teeth, and to encourage them in eating such things. Children, like all other human beings, will take the easier way, and unless definite habits are given them of chewing hard materials, will refuse or reject them. It is interesting to see how soon children learn to eat the inside pieces of bread, leav-

ing crusts, which represent in every way the best part of the bread for them, and it is particularly unfortunate that there has been a growing habit in recent years to remove the crust from bread in the making of small sandwiches for grown-ups as well as children.

In the paper for the Orthodontists I said: "Bony development depends on muscular use to a great extent and then on the action and reaction of exercise. When, for instance, a child has a lame leg the side of the pelvis above it does not develop properly. Growth is not merely a matter of provision of nutrition, but is the result of reaction to stimuli. Members of families that do not work much or take much exercise gradually acquire the delicate bony frame of the aristocrat, which leaves him at the mercy of the muscular force of the workers. A physician is always anxious about the shape of the pelvis of a woman, one of whose legs is seriously deformed, because it is almost sure to be undeveloped, and this will be serious when parturition comes. What is thus true of the heavy bones of the trunk, and particularly of the pelvis, seems to be true of the skull generally, as well as of the jaw-bones. Unless the mouth is held firmly closed by muscles in constant activity the jaw does not develop properly, hence the mouth-breathers' lack of breadth of chin as a rule. If the jaw does not develop well the skull itself seems to lose some of its development because it is not pulled upon and stimulated by the muscles that move the jaw."

THE INFLUENCE OF THE THYROID GLAND

In a certain number of cases of mental backwardness there is some glandular deficiency or disturbance at the root of it. A typical example of this is the failure of development of the thyroid gland. Some twenty-five years ago it was found that patients suffering from lack of the

thyroid, often distinctly backward in mentality, might be changed into rational beings in the course of a few weeks by supplying the thyroid substance. Unfortunately the little patients who improve in this way are rather infrequent, but the success in even a limited number of cases makes it an obligation on physicians to try this medication in children who show the marks of cretinism. Usually sufferers from thyroid disturbance or deficiency display

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well-marked physical characteristics, such as general failure of growth, stubby, sausage-like fingers and toes and a certain edema of the tissues all over the body. Only rarely are other patients than these benefited by the administration of thyroid substance, though it has been tried very faithfully on many different varieties of mental backwardness.

With the development of glandular therapy during the last ten years there have been rather frequent announcements that defective children have been benefited by certain combinations of glandular material. The cases are usually so hopeless that it is worth while having these remedies tried, but the evidence for any benefit is rather scanty. At the present time there are a number of advertising administrators of gland substances of various kinds who are quite ready to promise parents great benefit from this mode of treatment. So much deception has been

practiced, however, and there has been so much pretense, that parents should not allow themselves to be deceived by the advertisements and promises of those whose one idea is to take advantage of the parents' love for their children to get money from them.

Sometimes an X-ray of the skull reveals some thickening of the bony structure, especially at the base of the skull, with some encroachment on the space usually occupied by the pituitary gland. In a certain number of cases the administration of pituitary substance has seemed to do good for these patients. Other combinations of glands are used and advised on the general principle that the ductless glands throughout the body are largely dependent on a combination of the secretions of all of them to activate them all properly. Almost needless to say, this affords an opening for all sorts of far-reaching claims for the value of glandular therapy, which have not been substantiated by results up to the present time. Glandular medication has been so much abused that its employment should be taken up only under the direction of a thoroughly reputable physician, on whose judgment implicit reliance can be placed.

TRUANCY AND FATIGUE

Not a few of the runaways from school are children who are being pushed a little beyond the limit of their capacity and who develop as a consequence an over-irritability and tendency to react exaggeratedly. At times such runaways represent children who are not possessed of good self-control and who sometimes later in life develop some of the psychoses or mental affections. Most of them, however, are quite normal children put in unfortunate circumstances at a time when they are growing rapidly and all their physical vitality is needed to enable them

to grow properly. Efforts, then, to do intellectual work at the same time merely produce unfortunate reactions in which they break over the traces. Sometimes there is one particular subject that for some reason these children are very much opposed to or find it very difficult to do anything with. If it is their growing period their feelings in the matter should probably be respected as far as possible. While of course sympathy may serve to break down character to some extent, due allowance must be made for the physical condition, which affects their power of self-control as well as their likes and dislikes. Sometimes when their teachers say they will not, and their parents think they cannot, the doctor has the feeling that what is really the matter is that they cannot will properly for the time being and that all will be well after a while.

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XVII

DEFECTIVE CHILDREN

"If all our misfortunes were laid in one common heap whence every one must take an equal portion, most people would be contented to take their own and depart."

PLUTARCH—*Consolation in Apollonius.*

* * * *

"Depend upon it that if a man *talks* of his misfortunes there is something in them that is not disagreeable to him; for where there is nothing but pure misery there never is any recourse to the mention of it!"

DR. SAMUEL JOHNSON.

* * * *

"And although thou be reluctant to bear it, and feelest indignation, yet repress thyself, and suffer no inordinate word to come out of thy mouth whereby little ones may be offended."

THOMAS À KEMPIS—*Imitation of Christ.* Chapt. 57.

DEFECTIVE CHILDREN

Besides the backward children, that is, those with distinctly subnormal mental capacity, which the school system has been revealing to us in ever greater numbers as the laws for universal education have been better enforced, there are a number of children born who are seriously defective in mentality and for whom there is no hope of their ever being normal. Their only outlook is for a very limited mental life under careful guardianship, and in such circumstances as will not permit of their being victims of that human tendency to take advantage of the weak that is so marked in our time. Usually these children have distinctly misshapen heads, often much smaller, sometimes much larger than usual. Their external appearance betrays their abnormality. When their heads are smaller there has often been a premature ossification of the bones of the skull. When they are larger than normal there is often a collection of water within the skull in the ventricles of the brain and the condition is technically called hydrocephalus. They are classified according to the size of their heads into microcephalic and macrocephalic idiots.

ARRESTED MENTAL DEVELOPMENT

Some of these children will not develop any beyond their animal life. They will eat and sleep and move around, often incapable of being taught personal cleanliness and sometimes without being able to acquire the power of buttoning their clothes or caring for themselves in any way. Almost needless to say, these children ought to be cared for in an institution, or at least have a special attendant who gives her whole time to them. From this

lowest form of idiocy there are all degrees up to the moron, or high-grade imbecile, who often exhibits only a slightly greater amount of irregularity of feature and head than perfectly normal children. For it must not be forgotten that no two human beings are alike, and that there are an almost infinite number of individual differences in feature and head conformation quite compatible with perfectly normal intelligence. Some very curiously different individuals with peculiarities of skull that are very marked, and seem abnormal, prove to be quite intelligent. Some of these rather striking individuals have indeed been geniuses or have been possessed of very high talent.

The most important question with regard to these anatomically defective children is whether as they grow up they should be kept at home or be entrusted to the care of those accustomed to deal with such cases and under circumstances where they are likely to be given the best possible opportunities for the development of whatever little talents they may possess. Sometimes such children, even though they will never learn to read or write, can be taught to do many rather intricate manipulations in connection with the trades and modes of manual training. Some of them, as Blind Tom, who was exhibited by Barnum, may develop musical talent of a special kind that enables them to repeat music when heard or even to remember many complicated pieces of music. Blind Tom was a musical genius of this kind, though a low-grade idiot constantly needing a keeper. Some of them have had such unusual mathematical powers that they have been utilized as lightning calculators for exhibition purposes. One of them, whom I know, was quite intractable in an asylum for the criminal insane until allowed to exercise his positive genius for sculpture, though his efforts were crude enough. He had committed a number of crimes, had been

a violent asylum inmate, the terror of keepers, up to this, but after his practice of his art had once begun he became tractable and quiet. It was as if an outlet for his energies had been found to divert him from mischief. I once saw a church which had been decorated by one of these defectives, and while it was primitive and lacking in technique, it was not inartistic, and not so far from certain of the modern art modes as to be quite out of the pale of serious æsthetic interest.

Whenever these defective children can be trained in any of these modes of self-expression, this development constitutes an occupation for them which keeps them from destructive or disturbing activities better than anything else. Above all, however, it gives them a satisfaction and a sense of happiness as great, very probably, as they are capable of. Some of them are thus undoubtedly made much happier in life than people who have a full complement of intelligence. All this serves to demonstrate how properly trained care, even in an institution where they are surrounded by others like themselves, may be beneficial to them.

INSTITUTIONAL TREATMENT BEST

Parents are often loath, however, to send these defective children away from home, and sometimes display a very obstinate but unfortunate sentimentality in the matter. That this is sentimentality and not real affection is proved by the fact that for mere emotional reasons such parents prefer to keep the children near them rather than send them away where they would get more out of life for themselves and be ever so much happier. One sees at times something of the same sort of obstinacy in parents who object to the marriage of their normal children. I have known cases where a dying parent pledged the

remaining one not to send such a child away. Such a pledge, even though made under the solemn circumstances mentioned, should not be kept where it interferes with the real advantage of the little patient, and where besides, as is usually the case, the transfer to an institution benefits everyone concerned with him or her.

For not infrequently these children as they grow up prove to be very difficult to manage and sometimes they even injure, in their heedless animal way, the smaller normal children of the family, and occasionally, especially when as husky male defectives they have been kept at home up to fifteen or sixteen, they may injure the mother or some of the women of the household. Almost needless to say, this makes a desperately trying situation. Even where no such climax of unfortunate conduct develops, the mother and the other children are often kept on an anxious seat of extreme nervous tension because of the necessity for constant care, night as well as day.

A WRONG NOTION OF DUTY

As a consultant I have known not a few good mothers who insisted on fulfilling such a wrong notion of duty as this and who were made nervous invalids by the anxiety involved in the care of such a child. This has been the case in spite of the fact that the family was thoroughly able to stand the expense of sending the patients away to an institution to be cared for, an arrangement which would entirely dispense them and the others of the household from an unending, constantly nagging, nervous strain, unrelieved night or day, that only the best equilibrated could stand without serious disturbance. Unfortunately in more than one of these cases, after her boy was sent away, because at last it had been brought home to her that that would be better for him and for all concerned, the

mother proved not to have the reactive vitality necessary to get over the strain and continued to be an invalid for years. Some of her failure to react undoubtedly was due to the fact that the presence of the defective had made such constant calls on her solicitude as to give a preoccupation of mind of which she was now deprived, leaving her the chance and the time on her hands to think more of herself and her ills than was good for her. For these patients, as for the youthful insane, the principal care must be for the health of mind and body of those who are as yet well, and must not be subjected to severe strains.

A DISTURBING FACTOR IN THE HOUSEHOLD

What must always be kept in mind in these cases is that due regard for the other members of the family usually makes it ever so much better that such children should be placed in institutions. Other children of the family can be kept under much better discipline and receive the care they should have more readily without such a disturbing member in the household. Often parents have the feeling that their children may be abused if away from them, and undoubtedly there is some danger of that; but the danger has been greatly exaggerated. The stories of unfortunate abuses of these patients that we hear of are from the very old time. In recent years, particularly, institutions have come into existence which can be depended on, not only to take proper care of defectives, but to give them ever so much better opportunity to develop what little talent or manual expertness they may have than would be the case at home. Parents also dread the association of their children with other defectives, some of them of lower grade intelligence, and fear that this may react unfavorably on their offspring. As a matter of fact, however, what is particularly likely to irritate these children is association

with the thoroughly rational, who are so much more able to control themselves and find satisfaction in life than they are. Associating with those of their own grade of intelligence or a little lower removes some of the irritations of life and adds to the possibility of satisfaction.

THE EXAMPLE OF GHEEL

Back in the Middle Ages they developed the village treatment and care of these defectives. Gheel in Belgium was a typical example, though there were other village colonies for defectives in the Netherlands and Northern France. Parents brought their children to the village of Gheel centuries ago because there was a shrine of a martyr maiden of the old time at which they thought their children might be cured. They left them in the village so as to allow the influence of the martyr friend of children to have its full opportunity to be exerted. The townspeople gradually proceeded to organize the care of them in families, with not more than one or two in each family, and the result was very satisfactory. They were taught trades as far as they could learn them, they lived with the families, and the laws of the little town were drawn up with the very definite purpose of protecting them and especially of preventing any abuse of their lack of intelligence. The village system has been reëstablished in the modern time and promises to be an extremely valuable adjunct in the care of these patients. Children live outside most of the time, often do simple farm work out of doors, and are guarded from abuses.

THE CONTROL OF DANGEROUS INCLINATIONS

Very often these young folks, as they get beyond the age of puberty, develop sex inclinations which must be controlled. The marriages of defectives have been the

fruitful source of an increase in our defective population, and irregular births have proven even more productive of badly-endowed human beings. Only institutional life will save many of these young folks from such complications as this, and save society from further infliction by them. The question of institutional care then should, for the sake of the patients themselves, and the family and community, be taken up early in their lives, and usually decided in favor of their segregation.

Besides the reasons already given there are others which deserve to be mentioned and which represent distinct dangers to the people around them, which can be avoided only by keeping these patients under surveillance. As these defective children grow up they often develop manias of one kind or another. They come under the influence of an uncontrollable impulse to do something that would be vicious only that they are not responsible and their actions are unmoral and not immoral. These manias are usually destructive in character and sometimes go to the extent of severe cruelty to little children, even their mutilation or murder, and the defectives often become hideously ingenious in their ability to hide their agency in the matter. The newspapers bring us reports of these cases every now and then, in which children, both boys and girls, are murdered under circumstances that point to defective mentality as a factor in the case.

At times these defectives develop into fire-makers, pyromaniacs as they are called, who like to make fires in order to go through the excitement of seeing the fire engines come and having people rush out of their houses trying to save themselves and their children from the threatened danger. Some of them seem to be particularly delighted with the blaze. I have sat on insanity commissions for the

trial of such young folks, who, after having been committed to an institution, have regained their liberty through the insistence of their mothers, and then have gone back to setting fires once more, to the very great danger of the neighborhood in which they live.

THE MINISTRATIONS OF SURGERY

In the case of idiot and imbecile children, where the head is misshapen and sometimes of distinctly smaller size than normal, the question of operation on the skull for the relief of the supposed pressure on the brain due to too early ossification of the bones of the skull, often comes up. This premature development of bony substance in the skull is theoretically supposed to have prevented the proper and sufficient development of the brain. The first operation done on this theory by the French surgeon Lannelongue some thirty-five years ago was successful, but in a whole series undertaken afterwards he failed to secure any benefit for his patients. The account of that first operation, however, travelled far and still continues to influence medical and surgical opinion. The operation for relief of pressure is very seldom indicated, though a few selected cases have been benefited. The condition is so hopeless, however, apart from this, that it is easy to understand that parents and surgeons would be willing to give the little patients their one chance for rationality. The mortality for the operation is very high, but as the death of the little ones is a blessing for themselves as well as others, this has not discouraged the performing of the operation, which is perfectly justifiable under the circumstances, but should be performed only by someone who has had large experience in the specialty of brain surgery.

THE PROBLEM OF THE EPILEPTIC

A very serious form of defectiveness in children is that due to epilepsy. It is usually caused by definite physical changes in the nervous system, though as yet medical science is not always able to point out the cause. Not infrequently it is due to some distinct injury of the brain, as from a fall or a very hard knock, and then surgical aid may be called for and may accomplish a cure. Idiopathic epilepsy, that is, the form of the disease which occurs without any definite cause being traceable, is usually progressive. It gets worse as the years go on. It is extremely important, then, that it should be treated under the best possible care. Parents should not allow quacks or advertising specialists, so called, to treat their epileptic children. Above all, they should never buy the advertised remedies for the affection, for these always do harm rather than good. Life in the open air out in the country, away from the noise and bustle of the city and the excitement of city life, makes the best possible condition for these children to be brought up in. The organization of farm colonies has done an immense amount of good for them. The sooner parents recognize the fact that these children will probably never be able to live the ordinary life of modern competition in business, the better. Country life makes it possible for epileptics to live rather happily for good long lives.

While the usual forms of epilepsy commonly appear in early childhood, the attacks in the beginning frequently coming on during sleep, cases of epilepsy in older children have been observed which suddenly followed an illness from tonsillitis, or such contagious diseases as scarlet fever and measles. This type of epilepsy is believed to be due to an obstruction, caused by the inflammatory contagion, in the flow of the fluids which lie inside and outside

of the brain and spinal cord. Some ingenious surgical operations have been devised to relieve this condition, but, so far, the results have been far from brilliant, even in the hands of those few capable surgeons who specialize in surgery of the brain. Parents should never jump at the conclusion that surgical treatment will relieve a child of epileptic attacks. The opinion of even the most experienced and erudite brain surgeon, given after careful and painstaking examination in a well-equipped hospital, is likely to be conservative and not over-encouraging. Snap judgments and guarantees of cure by any individual, whether lay or professional, should be accepted with extreme caution by those who are in charge of a child suffering from epilepsy.

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XVIII

MEDICAL PATHS AND BY-PATHS

"In the treatment of nervous diseases, he is the best physician who is the most ingenious inspirer of hope."

Table Talk—SAMUEL TAYLOR COLERIDGE.

* * * *

"Truth is a good dog; but beware of barking too close to the heels of an error, lest you get your brains kicked out."

Table Talk—SAMUEL TAYLOR COLERIDGE.

* * * *

"They undertake to convey remedies of which they know but little, into a body of which they know less—to cure a disease of which they know nothing."

VOLTAIRE.

* * * *

"It is much more important to know what sort of a patient has a disease than what sort of a disease the patient has."

Old Doctor Parry of Bath (Quoted by Osler).

"The path of least resistance" is a highway that is much travelled by the individual with "nerves." But while it is an easy road to the traveller, it does not lead anywhere, and a mirage always lies at the end of it. When a child develops a food dislike and refuses to take, for instance, orange juice, the mother or nurse may add sugar to the fruit juice because it is an easy thing to do. After awhile the child demands that sugar be added to everything which he eats, unless the mother has meanwhile trudged back to the by-paths of common sense and patience. Patience is the essential virtue which the mother or the nurse of the nervous child *must* possess. There is no easy road, no royal road, to child-training. But because many parents do not understand this, children suffer and charlatanry thrives.

THE GOOD OLD DAYS

Of course nowadays the sale of nostrums containing narcotics is forbidden by law, but well within the memory of those not yet in middle life various preparations of opium and morphine were freely sold in all pharmacies, and even advertised as "nerve sedatives" for nervous children. Naturally the irritable child, or the colicky child, ceased to cry after having taken a good-sized dose of morphine flavored with anise and sugar—the soothing syrup soothed with good reason. The use of paregoric as a sedative, especially in infancy, is still in vogue among some nurses—and even some parents. Today paregoric can still be obtained without great difficulty, and every tablespoonful of paregoric contains a grain of opium. Let it be under-

stood that opium is a very valuable remedy, and that it is perfectly harmless when used properly, and indeed may even be prescribed in certain nervous and painful conditions with great benefit; but it should be so used only by the order and under the direction of a physician. No parent, and especially no nurse, should assume the responsibility for dosing a child with narcotics. As a rule this practice is followed more for the parent's or nurse's comfort than for the child's relief. The very oldest Egyptian medical manuscript and the oldest medical writing in existence, the *Ebers Papyrus,* recommends poppy juice to stop the baby's crying. This manuscript was written when Moses was about twenty-five years old. So, after all, the Egyptian priest-doctors probably first started this practice. Nowadays the physician has grown more cautious; when he uses opium he does so with good reason and with a definite purpose in view.

A NOT UNCOMMON TRAGEDY

In families unfortunate enough to have a child whose mental development is retarded to the degree of imbecility or idiocy, the family physician is frequently placed in a most difficult position. No mother finds it easy to convince herself that *her* child will not eventually grow up and develop to the same degree as other children. She sees the child, much retarded beyond his age, gradually improving in his mentality, and she resents the suggestion that this improvement cannot continue, and that it may come to a stop when the child has reached a mental age of five, or six, or ten years. Frequently, the family physician, in order to comfort her, encourages her in this view. Sometimes he is candid and sincere in predicting the outcome, and very frequently indeed the result of such candor not only loses for him the friendship of the parents of the child,

but eventually lands these parents in the arms of a charlatan. "Hope springs eternal in the human breast," and no chance for relief seems too remote to the unhappy parents of these unfortunate children. This is not only true of defective children, but also of those with active mental diseases—the insanities, and even the hysterias, and of course, epilepsy.

MAGIC AND MEDICINE

No matter how intelligent the parents may be, someone is certain to tell them of alleged cures performed by irregular practitioners, where "the doctors failed." Just as intelligence may be found in the illiterate, so education is very frequently wasted on the non-intelligent. That is why so many so-called medical cults exist; they feed on human hope as well as on human ignorance and credulity.

Besides, many people who are educated in other fields have only a rudimentary knowledge of science in general, and a total lack of knowledge of medical science. To them the physician is still the mysterious healer who possesses the magic touch, or carries a potent amulet. It is easier to believe this than to regard the doctor as a scientist trying to apply the laws of physics and chemistry and biology to the human body. And it also places the physician in a less dramatic rôle. After all, the word *pharmacy* comes from an old Greek root which also means magic.

THE PATHS OF GLORY, ETC.

So it is that certain medical cults have thrived and flourished within the last few years—practiced by men and women who attach some sort of a word to the suffix *path* and, after taking certain, or uncertain, training, assume to treat the sick. We have *osteopaths*, and *chiropractics*, and *neuropaths*, and *physio-therapeutists*, and

only a few days ago I came across a *naturo-path.* Of course the fact that this word naturopath really means "nature disease" does not make it sound any the less impressive. Sooner or later the parents of the child with mental or nervous diseases will be persuaded to place him under the care of one or the other of these non-medical practitioners. Such parents receive in return for their money one thing which they desire above all others—*hope.* The "paths" always lead to cheerful places. They always promise improvement, sometimes a cure. Contrasted with the unsatisfactory attitude of the family physician, they seem a pleasant enough lot. Besides, their theory is so simple that anyone can understand it. If it be an osteopath, then all illnesses are due to changes in the circulation caused by pressure on the spinal nerves in the neighborhood of the spine, or produced in these neighborhoods by diseases in distant organs. Manipulation and massage is the cure. The chiropractic finds all human ills to be due to actual pressure on the spinal nerves by the vertebræ which have become displaced. The fact that a vertebra cannot be displaced without tremendous force and acutely serious and grave symptoms does not matter. These pseudo-physicians massage and manipulate, pretend to replace vertebræ, and in this way cure *all* diseases. It is simple enough; one does not need to know much human anatomy or human physiology to practice this cult—the spinal column is the only important part of the human body. When somebody once told Mr. Dooley that he could "lick him," that philosopher remarked: "Your observation is interesting but not conclusive." No more pathetic sight can be conceived than the spectacle of a pair of devoted parents allowing such an individual, who is totally ignorant of most of the important facts of life, to manipulate and twist and distort the back of a defective child in the belated

hope of creating normal ideas in a brain that is probably abnormal in structure as well as in function. Defective or ineffective mental action in a child deserves careful and diligent study by an expert in child psychology and mental diseases, instead of modified gymnastics applied in the manner of a Turkish bath rubber by some self-constituted authority with a smattering of unsound information.

PSYCHO-ANALYSIS IN FACT AND FICTION

In recent years popular literature and even fiction is filled with accounts of the wonderful work of the psycho-analyst who figuratively dives into the pools of thought and brings to the surface disturbing complexes. Aside from any discussion of the value of the work of Freud and Jung, it is well to remember that psycho-analysis has been taken up by many individuals without proper medical or other preparatory training. These individuals certainly are incompetent and may be dishonest. The physician trained in the diagnosis of mental and nervous diseases knows enough about psycho-analysis to render the non-professional analyst an unnecessary evil.

THE MUCH-DISCUSSED GLANDS

Medical fashions change just as other fashions, and the treatment of all kinds of diseases by extracts of the ductless glands, such as the thyroid, or the pituitary, or the ovary, or the testicle, has become almost a fad. Much of this enthusiasm is ill-timed and premature. In the case of mental and nervous diseases some over-enthusiastic physicians have claimed permanent cures by the use, for instance, of a pituitary extract in retarded mental development. Others use a "shotgun" prescription containing the extracts of many glands. It is true that in cretinism, a disease characterized by retarded growth and slow men-

tal and physical progress, the use of thyroid extracts supplies a definite lack in the patient's tissues and much benefit results from its administration in proper dosage. Both mental and physical improvement is noted to a degree sometimes almost dramatic. But too much dependence should not be placed on the use of these glandular extracts in other and more obscure conditions. Dr. Lewellys Barker, Professor of Clinical Medicine at Johns Hopkins University, has made a special study of, and has edited a book about, the internal secretions of the human body, and the use of glandular extracts as remedies in disease. He probably is the leading American authority on the subject. Yet he counsels caution and conservatism in the use of these remedies, since we know scarcely anything about them. To none of them, indeed, does he credit any special virtue in mental diseases of children, excepting as thyroid extract is employed in the retarded mentality of the child suffering from cretinism.

Be certain, then, that the story of "the child just like this one" that was completely *cured* of epilepsy, or even of mental retardation, by a doctor who used gland extracts, is probably inaccurate, and possibly untrue. Beware of magical cures of this sort. They do not occur.

THE ADVERTISED CURES

Advertised cures for epilepsy usually contain either a bromide, or a newer preparation called luminal. These preparations do not cure; they simply postpone symptoms. They do not contain anything that the physician is not familiar with. This is, of course, a very disappointing statement. "What, then, are we to do?" ask the parents. "We have the responsibility for the care of the very nervous, or the epileptic or the mentally retarded or mentally unbalanced child—and what are we to do about it?"

There are certain helpful things to do, and many things not to do. First of all get the firm conviction that your physician is your best guide and counsellor. Ask him to tell you frankly what he thinks about the child. Up to the age of two it may be difficult to determine the potential mental capacity of an individual. Even long after that period tests such as the Simon-Binet may be misleading unless utilized by practiced hands. But the family physician can usually tell, in ways that he sometimes cannot explain, when a child in a family seems mentally different from others. Once he has decided that the child is in any way abnormal, advice should be sought from a competent authority in the mental and nervous diseases of the child, and of normal and abnormal psychology. This advice should be for the purpose of laying out a scheme of life for the child that will place the least strain upon his nervous system and afford him the best possible opportunity for physical development. These children, whether only neurotic, or epileptic, or moronic, need care rather than medicine; teaching rather than restraint; precision rather than sentimentality. Much can be done to remedy nature's defects, and in some cases, perhaps, to obliterate a neurotic tendency if it is not too marked. Careful guiding in study-work and regulation of mental strain and fatigue during the school years is of the utmost importance.

THE MENACE OF OVERWORK IN SCHOOL

Dr. J. Mace Andrews, head of the department of psychology and child study of the Boston Normal School, believes that modern public school methods may even promote mental disability among children, if children below grade are overworked.

"Thousands of mentally disabled ones passed through our public schools without their weaknesses of mind being

discovered and without anything being done to prevent life's tragedies," he says. "We now know that often this mental disorder begins in childhood and that much of it could be prevented by sound training in mental habits."

Perhaps some day our schools will realize the need for special grading and individual training of the abnormal child. When that time comes, much will have been accomplished to conserve the child's mental and nervous development until he is able to withstand the assaults of life.

ALLOWING THE CHILD TO BE NORMAL

For the minor evidences of nervousness and nervous habits that have been mentioned in foregoing chapters, the general treatment suggested will probably be effectual. The fact of most importance to remember is that patience and perseverance are two qualities that are essential in training any child in proper habits whether he be normal or abnormal. Most children, after all, will be normal in their nervous function if their parents and relatives allow them to be so. Hippocrates, the Father of Medicine, advised his disciples to choose remedies so constituted that if they did not do any good they could not do any harm. Parents who feel that they cannot put into practice the positive advice given in these pages may well take counsel from the aphorism of the legendary Greek physician, and perhaps even accomplish a certain amount of good by beneficent inactivity.

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